

## MOVE Low Carb Group Class

	TOPIC	PRESENTER
Week 1	Low Carb Nutrient Guidelines Low Carb Diet Overview – Induction Phase Medical Management of Nutritional Ketosis	Dietitian Physician
Week 2	Carbohydrates Mechanism of Action Clinical Complications of a High Carbohydrate Diet Medical Management continued	Dietitian Physician
Week 3	Hydration Adherence Issues to Low Carb Diet	Dietitian Physician
Week 4	Protein Ongoing Weight Loss Phase Side Effects of Certain Carbs Low Carbs & Lab Test Results	Dietitian Physician
Week 5	Fats Omega 3-6-9 Social Challenges on Low Carb	Dietitian Physician
Week 6	Inflammation and Carbohydrates Exercise on Low Carb Diet	Dietitian Physician
Week 7	Review of Metabolic Function Pre-Maintenance Phase Relapse Prevention	Dietitian Physician
Week 8	Lifetime Maintenance Phase Medications, Labs, Follow-up	Dietitian Physician



***MOVE  
LOW CARB  
PROGRAM  
Week 1***



# LOW CARB BASICS

## NUTRIENT GUIDELINES

### CARBOHYDRATES

- Phase 1 (Induction)
  - 20 grams net carbs/day
  - 12-15 grams of those net carbs should come from foundation vegetables
  - Phase 1 is healthy; you can stay in Phase 1 for a lifetime
- Phase 2 (Ongoing Weight Loss)
  - 20 grams net carbs + increase by 5 grams net carbs (at a time) – to personal tolerance for continued weight loss
  - Continue 12-15 grams net carbs from foundation vegetables
  - Phase 2 is healthy; you can stay in Phase 2 for a lifetime
- Phase 3 (Pre-Maintenance)
  - 20 grams net carbs + increase by 10 grams net carbs (at a time) – to personal tolerance – to maintain goal weight
  - Continue 12-15 grams net carbs from foundation vegetables
  - Phase 3 is healthy; you can stay in Phase 3 for a lifetime
- Phase 4 (Lifetime Maintenance)
  - complex vs. simple carbs – continue to count carbs to your personal tolerance – to maintain your goal weight and prevent weight gain; approximately 50-100 grams net carbs per day
  - Continue 12-15 grams net carbs from foundation vegetables
  - Phase 4 is healthy; you can stay in Phase 4 for a lifetime

**No sugar**  
**No fruit**  
**No juice**  
**No milk**  
**No starch**  
**No alcohol**

## **SALT**

Essential to prevent “atkins flu” symptoms

Approximately 2000-4000 mg/day

1 cup broth/day (bouillon cube mixed in 1 cup hot water)

If needed – you may drink 2-3 cups broth/day

If this causes fluid retention or weight gain, then cut back on quality

## **POTASSIUM**

Essential to prevent “atkins flu” symptoms

Vegetables are high in potassium

2 cups vegetables/day

2 cups salad greens/day

## **PROTEIN**

Essential to prevent muscle loss

Quantity: adequate but not excessive

Based on Height:

Under six foot 2 inches = 4-6 oz. protein 3 x day

Six foot 2 inches or more = 8 oz. protein 3 x day

(1 oz. protein = 7 grams)

## **FATS**

Fatty acids are vital ingredients in cell membranes and necessary for healthy brain function.

When you limit carbohydrate intakes to phase 1 and phase 2, your body recovers its capacity to burn fat; as a result, your fat intake can be reasonably high without adverse effects on weight or health; however, if your carbohydrate intakes increase to phase 3 or phase 4 (or higher) – it is VERY important to rely on healthy unsaturated fats to prevent cardiac problems

Choose healthy fats whenever possible (mono-unsaturated oils are best choices, such as olive oil and canola oil)

Avoid trans fats (shortening, margarines, hydrogenated nut butters, fried foods)

## **WATER**

Approximately 75% of your body is composed of water. The low carb diet has a diuretic effect that starts within the first few days. Drinking enough water is important to prevent dehydration. You should be drinking at least 100 oz. of plain water daily to meet your fluid needs.

## ***MOVE LOW CARB PROGRAM***

### ***Week 1***

#### **“No Sugar, No Starch” Diet Overview**

##### **Introduction**

This diet, to put it quite simply, is a diet low in sugary and starchy foods. The diet consists of “real” food and includes meat, fish, cheese, eggs, salads, and vegetables. This eating plan will provide your body with the nutrition that it needs, while limiting food that your body does not need, especially nutritionally-empty carbohydrates. Your carbohydrate intake will be around 20 grams or less per day. This means that you will need to avoid sugar, bread, fruit, flour, pasta, or any other sugary/starchy foods that have high carbohydrate contents. We will provide you with a list of foods to assist you in changing your eating patterns. One of the advantages of following a low-carbohydrate diet is that it tends to have a natural appetite reduction effect; therefore, you do not have to be hungry while losing weight.

Medical supervision is recommended for any weight loss program, especially if you are currently taking any medications. As your weight decreases and your health improves, medications will be adjusted accordingly. We will also monitor blood work to make sure that your numbers are within the normal range. In addition, research has shown that there is a positive relationship between how often you see your doctor and how much weight you lose. Many of our patients have reported that their regularly-scheduled appointments help to ensure that they follow the diet.

##### **Side Effects**

The “no sugar, no starch” diet does have some potential side effects, as does any effective weight loss program. Although they will not seriously impact your health and will disappear quickly, they can be frustrating and bothersome. These side effects include bad breath, constipation, sugar cravings, and flu-like symptoms. The following recommendations can help you avoid or minimize these side effects.

**Drink Up:** Your body’s cells need fluids to function properly. It is important to drink an **adequate** amount of fluid per day – preferably water or another non-caffeinated beverage. Not only is water good for your cells, water also helps prevent constipation and bad breath.

**Constipation:** If you are experiencing constipation, there are a number of ways that you may address the issue. Dr. Ferguson will help you choose the approach that is right for you.

- use 1 **teaspoon** of milk of magnesia at bedtime daily
- add 1-2 cups of fiber-rich vegetables to your diet per day along with 2 cups salad greens daily
- have 1 to 2 servings per day of sugar-free gum or sugar-free candy that contains sorbitol or another sugar alcohol
- use sugar-free Metamucil twice a day

When we have determined which approach will be best for you, you may use that method until symptoms resolve. If the issue persists and you need additional assistance, please let Dr. Ferguson know, and she will advise you accordingly.

**Breath:** Some people experience bad breath in the initial stages of a “no sugar, no starch” diet. This can usually be avoided by drinking plenty of water and performing good oral hygiene. This includes seeing a dentist, brushing your teeth twice a day (including your tongue), and flossing daily. If the problem persists, try sugar-free gum or mints.

**Sugar cravings:** As your body adjusts to your new way of eating, you may initially experience cravings for the high-carbohydrate foods that are not on your diet. Remember that the fewer carbohydrates you have in your diet, the sooner the cravings will subside. In the meantime, eat plenty of protein and do not try to reduce fat intake as you eliminate carbohydrates; focus on the many delicious foods that you are allowed to have on your diet. A sugar-free beverage, such as diet soda or Crystal Lite, or some sugar-free jello may help with these cravings as well. If cravings become distracting and unmanageable, contact Dr. Ferguson or the dietitians (Norma Thiel and Kelly Lord). They will have additional suggestions to get you through this initial period of adjustment.

**Bouillon:** Occasionally, patients can experience fatigue, headaches, body aches, difficulty concentrating, or other flu-like symptoms when they begin the diet. These symptoms are usually fairly mild and pass quickly; they are a sign that your body is going through a transitional period from burning sugars and starches to burning fat for fuel. To help prevent these symptoms, we recommend drinking beef or chicken broth up to three times a day (**DO NOT USE LOW SODIUM BOUILLON unless instructed to do so by Dr. Ferguson**). This will replenish electrolytes while your body is going through this transition. To make the broth, simply drop a cube of bouillon into a cup of hot water and drink it. Although your energy levels will soon return to normal, many patients have reported they enjoy the broth and continue drinking it beyond the first week. If you have lingering symptoms of this type after the first few weeks, you may have another health concern that should be monitored. Please alert Dr. Ferguson if this should happen.

### **Ketosis**

Ketosis is a state in which your body produces ketones. Ketones are the direct result of strictly following a “no sugar, no starch” diet and are a sign that your body is burning fat for fuel. After you begin the diet, we will measure your urine for ketones. You can also do this at home if you wish with urinary ketone test strips from your local pharmacy. If there are no ketones in your urine, we will try to determine what, if anything, in your diet is preventing you from entering ketosis. In some instances, people are unable to go into ketosis. However, these people can still lose weight and enjoy better blood-sugar control while following the “no sugar, no starch” diet.

### **What happens if I “slip”?**

Once you begin this diet it is important that you follow the dietary guidelines we provide. If you decide to “slip,” even a little bit, you may effectively stop the weight loss process for up to three days. This means you will come out of ketosis, and you may gain



back several pounds of water weight. You can also expect blood sugar control to briefly worsen. The most important thing to do if you “slip” is to get right back on track. Don’t wait until the next day; make sure your next meal is a low-carbohydrate meal. If you find that you are struggling with the diet, call Dr. Ferguson for advice.

### **Vitamins and Supplements**

Although the “no sugar, no starch” diet is very nutritious, we recommend that you take a multivitamin to be sure that you are getting all of the vitamins and minerals that you need. You do not have to spend a lot of money on vitamins. A once-a-day vitamin like Centrum Silver or its generic equivalent will meet your needs and is affordable.

In addition to a multivitamin, we recommend that you take 1000 mg per day of fish oil **with a meal**. You can take this at one time or in two doses of 500 mg. Choose a good quality fish oil to avoid any stomach upset and always take this supplement with food. We will let you know if we believe that you need additional supplementation.

### **Cholesterol**

Many patients ask how the “no sugar, no starch” diet will affect cholesterol levels since it isn’t a low-fat diet. Quite simply, if you follow the diet as we prescribe, your cholesterol levels will improve. To ensure this is the case and for your own information, we will periodically check your cholesterol levels.

### **Your weight is not the only thing that will improve.**

If you adhere to your new way of eating, you can expect to lose pounds and inches. As you move towards your weight loss goals, remember that there is more to a healthier body than numbers on the scale. You may experience improved energy levels, better appetite control, and, in general, a reduction in the frequency and severity of the symptoms of a number of health concerns you may have experienced before beginning the diet.

If you are diabetic, you can expect better blood sugar control and a reduction in your diabetes medications. Some patients are able to stop taking their diabetes medications completely! However, if you are taking diabetes medications, including insulin, do not change the dosage or stop taking them unless instructed to do so by Dr. Ferguson.

### **Increasing Activity and Reducing Stress**

In addition to changing your eating habits, you may wish to change some other aspects of your lifestyle in order to improve your overall health. Stress and inactivity can negatively impact your health and even make it more difficult for you to lose weight. However, there are many things you can do learn to handle stress more effectively and to add activity to your daily routine. Reducing stress may improve your ability to handle dietary temptations, sugar cravings, and emotional eating patterns. Increasing your activity level may help reduce stress, decrease appetite, build muscle, and improve bone density.

## ***Getting Started Week 1***

### ***“No Sugar, No Starch” Meal Plans and Diet***

#### **LIST OF PERMITTED FOODS**

This diet is focused on providing your body with the nutrition it needs, while eliminating foods that your body does not require, namely nutritionally-empty carbohydrates. For most effective weight loss, you will need to keep the total number of carbohydrate grams to **20 grams per day or less**. Your diet is to be made up exclusively of foods and beverages from this handout. If the food is packaged, check the labels and make sure that the carbohydrate count is 1-2 grams or less for meat and dairy products, 5 grams or less for vegetables. All food may be cooked in a microwave oven, baked, boiled, stir-fried, sautéed, roasted, fried (with no flour, breading, or corn meal), or grilled.

#### **When you are hungry, EAT YOUR CHOICE OF THE FOLLOWING FOODS:**

**Meat:** Beef (hamburger, steak, etc.), pork, ham (unglazed), bacon, lamb, veal, or other meats. With processed meats (sausage, pepperoni, hot dogs, etc.), check the label—carb count should be about 1 gram per serving.

**Poultry:** Chicken, turkey, duck, or other fowl

**Fish & Shellfish:** Any fish including tuna, salmon, catfish, bass, trout, shrimp, scallops, crab, and lobster.

**Eggs:** Whole eggs are permitted without restrictions.

**You do not have to avoid the fat that comes with these foods.**

**You do not have to deliberately limit quantities, but you should stop eating when you feel full.**

#### **FOODS THAT MUST BE EATEN EVERY DAY:**

**Salad Greens: 2-3 cups a day.** Includes: arugula, bok choy, cabbage (all varieties), chard, chives, endive, greens (all varieties including beet, collards, mustard, and turnip), kale, lettuce (all varieties), parsley, spinach, radicchio, radishes, scallions, and watercress. (If it is a leaf—you can eat it.)

**Vegetables: 1-2 cups (measured uncooked) a day.** Includes: artichokes, asparagus, broccoli, Brussels sprouts, cauliflower, celery, cucumber, eggplant, green beans (string beans), jicama, leeks, mushrooms, okra, onions, peppers, pumpkin, shallots, snow peas, sprouts (bean & alfalfa) sugar-snap peas, summer squash, tomatoes, rhubarb, wax beans, zucchini.

#### **AS NEEDED during the first few weeks of the diet:**

**Bouillon: up to 3 times daily—as needed for sodium replenishment.** Clear broth (consommé) is strongly recommended. Unless we tell you that you need to restrict your salt intake, DO NOT USE LOW SODIUM BOUILLON.

#### **FOODS ALLOWED IN LIMITED QUANTITIES:**

**Cheese: up to 1-3 ounces a day.** Includes: hard, aged cheeses such as Swiss, cheddar, brie, camembert, bleu, mozzarella, Gruyere, cream cheese, goat cheeses. Avoid

processed cheeses, such as Velveeta. Check the label; carbohydrate count should be less than 1 gram per serving.

***Cream: up to 3-4 tablespoons a day.*** Includes heavy, light, or sour cream (not half & half)

***Mayonnaise: up to 2-4 tablespoons a day.*** Duke's and Hellman's are low-carb. Check the labels of other brands.

***Olives (black or green): up to 8-10 a day.***

***Avocado: up to 1/2 of a fruit a day.***

***Lemon/lime juice: up to 1-3 teaspoonfuls a day.***

***Soy sauces: up to 3-4 tablespoons a day.*** Kikkoman is a low-carb brand. Check the labels of other brands. Tamari wheat free (or gluten-free) soy sauce is lowest carb brand.

***Pickles, dill or sugar-free: up to 1-2 serving a day.*** Mt. Olive makes sugar-free pickles. Check the labels for carbs and serving size.

**SNACKS:** Pork rinds/skins; pepperoni slices; ham, beef, turkey, etc. roll ups; deviled eggs

## THE PRIMARY RESTRICTION: CARBOHYDRATES

On this diet, no sugars (simple carbohydrates) and no starches (complex carbohydrates) are eaten. The only carbohydrates we encourage are the nutritionally-dense, fiber rich vegetables listed on page 6.

Sugars are simple carbohydrates. **Avoid these kinds of foods:** white sugar, brown sugar, honey, maple syrup, molasses, corn syrup, beer (contains barley malt), milk (contains lactose), flavored yogurts, fruit juice, and fruit.

Starches are complex carbohydrates. **Avoid these kinds of foods:** grains (even "whole" grains), rice, cereals, flour, cornstarch, breads, pastas, muffins, bagels, crackers, and "starchy" vegetables such as slow-cooked beans (pinto, lima, black beans, etc.), carrots, parsnips, corn, peas, potatoes, French fries, potato chips, etc.

## FATS & OILS

All fats and oils, even butter, are allowed. Olive oil and peanut oil are especially healthy oils and are encouraged in cooking. Avoid margarine and other hydrogenated oils that contain trans fats.

For salad dressings, the ideal dressing is a homemade oil and vinegar dressing, with lemon juice and spices as needed. Bleu cheese, ranch, Caesar, Italian are also acceptable if the label says 1-2 grams of carbohydrate per serving or less. Avoid "lite" dressings, as these commonly have more carbohydrate. Chopped eggs, bacon, and/or grated cheese may also be included in salads.

Fats, in general, are important to include because they taste good and make you feel full. You, therefore, are permitted the fat or skin that is served with the meat or poultry that you eat, as long as there is no breading on the skin. **Do not attempt to follow a low-fat diet!**

## SWEETENERS AND DESSERTS

If you feel the need to eat or drink something sweet, you should select the most sensible alternative sweetener(s) available. Some available alternative sweeteners are: Splenda (sucralose), Nutrasweet (aspartame), Truvia (stevia/erythritol blend), and Sweet & Low (saccharin). Because they occasionally cause stomach upset, avoid food with sugar alcohols (sorbitol, maltitol, etc.) for now, although they may be permitted in limited quantities in the future.

## BEVERAGES

Drink as much as you would like of the allowed beverages, but do not force fluids beyond your capacity. The best beverage is water. Essence-flavored seltzers (zero carbs) and bottled spring and mineral waters are also good choices. Water is important with higher protein intakes. How much fluid? Divide your weight in half – that will be the amount of ounces you should drink to meet your fluid needs adequately – 80-90% of those fluids should come from plain water or water with lemon or lime as the best practice and 10-20% other fluids (see next paragraph).

Example:  $300 \text{ lbs.} \div 2 = 150 \text{ oz. fluids/day}$   
(120 oz. plain water and 30 oz. other fluids)

Caffeinated beverages: Some patients find that their caffeine intake interferes with their weight loss and blood sugar control. With this in mind, you may have **up to 1-2 servings** of coffee (black, or with artificial sweetener and/or cream), tea (unsweetened or artificially sweetened), or caffeinated diet soda per day. If you have diabetes – decaf would make a better choice, as caffeine impacts glucose (will cause slightly higher blood sugar levels).

## ALCOHOL

At first, we ask that you avoid alcohol consumption on this diet. As weight loss and dietary patterns become well-established, alcohol in moderate quantities may be added back into the diet at a later point in time. We can help you make the best choices for low-carbohydrate alcoholic beverages if needed.

## QUANTITIES

**Eat when you are hungry; stop when you are full.** The diet works best on a “demand feeding” basis; i.e., eat whenever you are hungry; try not to eat more than what will satisfy you. Learn to listen to your body. A low-carbohydrate diet has a natural appetite reduction effect to ease you into the consumption of smaller and smaller quantities comfortably. Therefore, do not eat everything on your plate “just because it’s there.” On the other hand, don’t be hungry! You are not counting calories. Enjoy losing weight comfortably, without hunger or cravings.

We do recommend that you start your day with a nutritious low-carbohydrate meal. If you need suggestions for quick and easy breakfast ideas, look at the initial recipe handout. Also note that many medications and nutritional supplements need to be taken with food at each meal or three times per day.

## IMPORTANT TIPS AND REMINDERS

***The following items are NOT on the diet:*** sugar, bread, cereal, flour-containing items, fruits, juices, honey, whole or skimmed milk, yogurt, canned soups, dairy substitutes, catsup, sweet condiments and relishes, etc.

***Avoid these common mistakes:*** Beware of “fat-free” or “lite” diet products and foods containing “hidden” sugars and starches (such as coleslaw or sugar-free cookies and cakes). Check the labels of liquid medications, cough syrups, cough drops, and other over-the-counter medications that may contain sugar. Avoid products that are labeled “Great for Low-Carb Diets!”

You may find the following books and websites informative:

*Atkins Diabetes Revolution*, *Dr. Atkins’ New Diet Revolution*, *Atkins for Life*, and *Dr. Atkins’ New Diet Cookbook*, all by Dr. Robert C. Atkins; *Protein Power* by Michael R. Eades & Dr. Mary Dan Eades; *500 Low-Carb Recipes* by Dana Carpender; *The Low-Carb Cookbook* and *Living Low-Carb*, both by Fran McCullough .

Active Low-Carbers Forum: <http://www.lowcarb.ca>

Linda’s Low-Carb Menus & Recipes: <http://genaw.com/lowcarb/> This has a terrific collection of kitchen-tested recipes.

Low-Carb Support Group: <http://www.lowcarbfriends.com/bbs/>

Low-Carb Diet Plans: [www.lowcarb.ca/atkins-diet-and-low-carb-plans/index.html](http://www.lowcarb.ca/atkins-diet-and-low-carb-plans/index.html)

Dana Carpender’s website: [www.holdthetoast.com](http://www.holdthetoast.com)

Life In Action: [www.lifeinaction.org](http://www.lifeinaction.org)

Jimmy Moore’s blog: [www.livinlavidalocarb.blogspot.com](http://www.livinlavidalocarb.blogspot.com)

Lauren Benning’s Healthy Low-Carb Treats: <http://www.healthyindulgences.blogspot.com>

You may find the information in these books and websites helpful; however, the diet you are to follow during this program is the one outlined for you; we ask you to follow the specific diet guidelines from the book, “The New Atkins For A New You” by Dr. Eric C. Westman, Dr. Stephen D. Phinney, and Dr. Jeff S Volek.

## ACRONYMS

**CLL** – Carbohydrate Level for Losing

**OWL** – Ongoing Weight Loss

**ACE** – Atkins Carbohydrate Equilibrium

## LOW-CARB MENU PLANNING

### PHASE 1: INDUCTION

What does a low-carb menu look like?  
You can plan your daily menu by using the following guidelines

#### Breakfast

Meat or other protein source (usually eggs)

Fat source

*This may already be in your protein, for example, bacon & eggs have fat in them;  
but if your protein source is “lean”,  
add some fat in the form of butter, cream (in coffee), or cheese.*

Low-carb vegetable (if desired)

*This can be in an omelet or breakfast quiche.*

#### Lunch

Meat or other protein source

Fat source -- *If your protein is “lean”—add some fat with butter, salad dressing, cheese,  
cream, avocado, etc.*

1 to 1 ½ cups of salad greens or cooked greens

½ to 1 cup of vegetables



#### Snack

Low-carb snack that has protein and/or fat

#### Dinner

Meat or other protein source

Fat source -- *If your protein is “lean”—add some fat with butter, salad dressing, cheese,  
cream, avocado, etc.*

1 to 1 ½ cups of salad greens or cooked greens

½ to 1 cup of vegetables

#### Beverages

Water, plain (lemon or lime may be added for flavor) – 90-120 oz/day

Coffee, black or with cream – 1-2 cups/day

Hot Tea, plain or with lemon or cream – 1-2 cups/day

Broth (chicken or beef or vegetable) – 1-3 cups/day

## **SAMPLE DAY MAY LOOK LIKE THIS**

### **PHASE 1: INDUCTION**

#### **Breakfast**

Bacon or sausage  
Eggs



#### **Lunch**

Grilled chicken on top of salad greens and other vegetables  
with bacon, chopped eggs  
salad dressing



#### **Snack**

Pepperoni slices and a cheese stick  
1 cup mixture of raw cut-up vegetables w/dip

#### **Dinner**

Burger patty or steak  
Green salad with other vegetables and salad dressing  
Green beans with butter



#### **Beverages**

Water, plain (lemon or lime may be added for flavor) – 90-120 oz/day  
Coffee, black or with cream – 1-2 cups/day  
Hot Tea, plain or with lemon or cream – 1-2 cups/day  
Broth (chicken or beef or vegetable) – 1-3 cups/day

## Reading a low-carb label

Start by checking the Nutrition Facts.

- Look at serving size, total carbohydrate, and fiber.
- Use Total Carbohydrate Content only
- You may subtract fiber from total carbohydrate to get the “effective or net carb count”
  - In the example below, **7 grams carbohydrate – 3 grams fiber = 4 grams of effective (or net) carbs**
  - That means the effective (net) carb count of cauliflower is 4 grams per serving.
  - No need to worry about calories or fat.
  - Effective (net) carb count of vegetables should be 5 grams or less
  - Effective (net) carb count of meat or condiments should be 1 gram or less

Also check the ingredient list. Avoid foods that have any form of sugar or starch listed in the first 5 ingredients.

**CAULIFLOWER:**

Nutrition Facts	
Serving Size 1/4 med. head, raw (146g)	
Amount Per Serving	
Calories 35	
	% Daily Value*
Total Fat 0g	0%
Sodium 45mg	2%
Potassium 400mg	11%
Total Carbohydrate 7g	2%
Dietary Fiber 3g	12%
Sugars 3g	
Protein 3g	
Vitamin A **	Vitamin C 150%
Calcium 2%	Iron 2%
Vitamin D **	Vitamin E **
Vitamin K **	Thiamin **
Riboflavin **	Niacin **
Vitamin B6 **	Folate **
Vitamin B12 **	Biotin **
Pantothenic Acid **	Iodine **
Magnesium **	Zinc **
Selenium **	Copper **
Manganese **	Chromium **

Not a significant source of calories from fat, saturated fat, and cholesterol.

\*\*Contains less than 2 percent of the Daily Value of these nutrients.

\*Percent Daily Values are based on a 2,000 calorie diet.

sugar!

**Sugar by any other name is still**

All of these are forms of sugar:

Sucrose  
 Dextrose  
 Fructose  
 Maltose  
 Lactose  
 Glucose  
 Honey  
 Syrup  
 High-fructose corn syrup  
 Maple syrup  
 Brown rice syrup  
 Molasses  
 Evaporated cane juice  
 Cane juice  
 Fruit juice concentrate  
 Corn sweeteners



## NET CARBS

Net Carbs = Digestible Carbs

You don't digest fiber – so no need to count fiber as part of your carbohydrate counting.

You don't need to count sugar alcohols (including glycerin). Sugar alcohols are not fully absorbed by the gut; they provide roughly half the calories compared to sugar; the incomplete and slower absorption results in a minimal impact on blood sugar and insulin response. This means that sugar alcohols don't interfere with fat burning, making them acceptable. They can produce a laxative effect and cause some gastrointestinal problems when consumed in excess – so beware.

You have to do MATH !

Steamed Green Beans  
Serving size: 1/2 cup  
Carbohydrate: 4.9 grams  
Fiber: 2.0 grams  
NET CARBS: 2.9 grams



Romaine Lettuce  
Serving size: 1 cup  
Carbohydrate: 1.4 grams  
Fiber: 1.0 grams  
NET CARBS: 0.4 grams

Low Carb Snack Bar  
Serving Size: 1 bar  
Carbohydrate: 24 grams  
Fiber: 2 grams  
Sugars: 1 gram  
Sugar Alcohols: 18 grams  
NET CARBS: 4 grams

Nutrition Facts		
Serving Size: About (20g)		
Servings Per Container: 16		
	Amount Per Serving	% Daily Value*
<b>Total Calories</b>	60	
Calories From Fat	15	
<b>Total Fat</b>	2 g	3%
Saturated Fat	1 g	4%
Trans Fat	0 g	
<b>Cholesterol</b>	0 mg	0%
<b>Sodium</b>	45 mg	2%
<b>Total Carbohydrates</b>	15 g	5%
Dietary Fiber	4 g	17%
Sugars	4 g	
Sugar Alcohols (Polyols)	3 g	
<b>Protein</b>	2 g	
Vitamin A		0%
Vitamin C		0%
Calcium		2%
Iron		2%

\*Percent Daily Values are based on a 2,000 calorie diet.

**Ingredients:** Wheat flour, unsweetened chocolate, erythritol, inulin, oat flour, cocoa powder, evaporated cane juice, whey protein concentrate, corn starch (low glycemic), natural flavors, salt, baking soda, wheat gluten, guar gum

Reference:

Dr. Eric C. Westman, Lifestyle Medicine Clinic, Duke University Medical Center (919) 620-4061; Fax: (919) 620-1294; Email: [ewestman@duke.edu](mailto:ewestman@duke.edu)



## **MOVE LOW CARB PROGRAM**

### **MEDICAL NURSING / PHYSICIAN**

#### **Week 1**

- Nursing:
  - weight, blood pressure
- Mechanism of low carbohydrate diet
  - Ketosis
- Medication adjustments NOW
  - Diabetes and 'water pills'
    - Reduce dose of stop taking now
  - Gout and gall stone prevention
- Your primary care and diabetes providers will be notified by MOVE staff of your participation and medication changes
- Obtain labs and EKG if ordered and not already done

#### **Week 2**

- Nursing:
  - weight, blood pressure
  - medication lists provided (homework for week 3)
- Submit symptom reporting and monitors worksheet
- Medication adjustments
  - Diabetes
  - Diuretics (water pills)
  - Gout prevention
  - Gall stone prevention
- 'Flu' symptoms management
  - Bouillon / broth (sodium/salt)
  - Foundation vegetables (potassium)
  - Fluids
  - Avoid starting new exercise regimen, continue current levels

### **Week 3**

- Nursing:
  - weight, blood pressure
- Submit symptom reporting and monitors worksheet
- Medication list submitted, updated with current meds/doses
  - Special focus on insulin, other diabetes meds, blood pressure and 'water' pill meds
- Symptom control
- Adherence issues
  - Food journal reporting WITH net carb counting
  - Self ketone checks
  - Broth/bouillon
  - Fluids
  - Foundation Vegetables
  - Hunger
  - Off track
  - Utilize resources
  - Attendance

### **Week 4**

- Nursing:
  - weight, blood pressure
- Submit symptom reporting and monitors worksheet
- Weight graphs
- Test results and discussion
  - Blood pressure
  - EKG
  - Labs
    - Diabetes: Glucose, Hemoglobin A1c
    - Lipids: Triglycerides, HDL, LDL
    - Inflammation: CRP, Uric Acid
    - Liver
    - Urinary: Kidney, Urine

## **Week 5**

- Nursing:
  - weight, blood pressure
- Submit symptom reporting and monitors worksheet
- Social Issues
  - Goals and change
  - Restaurants / eating out / snacks / eating with others
  - Breath
  - New clothes, new looks, new life
  - Bias
  - Support
  - More good days than bad
- Self monitoring for success
  - Determine your ACE

## **Week 6**

- Nursing:
  - weight, blood pressure
- Submit symptom reporting and monitors worksheet
- Exercise
  - Mechanism of Fuel
  - Diet and Exercise
  - Benefits of Exercise
  - Recommendations for Exercise

## **Week 7**

- Nursing:
  - weight, blood pressure
  - medication lists provided (homework for week 8)
- Submit symptom reporting and monitors worksheet
- Relapse prevention and control
  - Motivation, Slippery Slope, Overconfidence
  - Habit, Best Choices
  - Reasonable Expectations, Self Accountability
- Alcohol limitation

## **Week 8**

- Nursing:
  - weight, blood pressure
- Submit symptom reporting and monitors worksheet
- Medication list submitted, updated with current meds/doses
  - Special focus on insulin, other diabetes meds, blood pressure and 'water' pill meds
- Revisit Medications
  - Diabetes
  - Hypertension
  - Gout and Gallstone Prevention
  - Supplements
- Measures of Success and Long Term
  - Parting comments and sharing the experience
- Weight Graphs
- Lab Orders
- Schedule body composition MOVE RN clinic
- Schedule follow up individual MOVE Physician
- Resume MOVE Maintenance / other MOVE programs

## MEDICAL MANAGEMENT OF NUTRITIONAL KETOSIS (Very Low Carbohydrate) FOR WEIGHT LOSS

Premise: the body has evolved to protect itself by allowing alternative routes for energy storage and utilization. Options when food is readily available (stores it at fat) and when NOT available (makes sugar and uses up fat) exist.

### **KETOSIS, NUTRITIONAL**

- Ketones substitute for glucose
- Your body burns ketones and fatty acid for energy including fueling heart and other muscles. When your body burns its own fat for fuel, this is lipolysis.
- Ketone bodies (B-hydroxybutyrate and acetoacetate) contain 4 cal/gram
- 30 grams glucose per day is sufficient for those few body areas that do not utilize ketone fuel:
  - Red blood cells, Eye cornea/lens/retina, Kidney medulla
- Gluconeogenesis (liver making glucose) replaces dietary glucose
- Dietary amino acids provide fuel for gluconeogenesis
- Ketone detection strips may verify ketosis and lipolysis, however individual responses vary:
  - 'using up' ketones for energy may leave urine 'empty' of ketones, despite ketosis
  - Type 2 diabetes can also reduce likelihood of urinary ketones especially if taking diabetes medications
  - Ketones may decrease over time, possibly due to:
    - Increased efficiency in using up ketone bodies for energy
    - Decreased in production of ketone bodies over time (from adding carbs back into diet)
- Body Fat loss (lipolysis) is enhanced by ketosis via
  - Reduction in insulin promotes lipolysis (dissolving fat for fuel)
  - Inhibition of metabolic pathways of lipogenesis (fat production and storage)
- Nutritional ketosis is a diet that lowers your body's insulin production.

### **NUTRITIONAL KETOSIS VS DIABETIC KETOACIDOSIS**

Nutritional Ketosis is associated with:

- Low level of ketone elevation
- Not linked with reduction in pH
- No significant metabolic acidosis
- Not sick

## Diabetic Ketoacidosis (abnormal)

- Absence of insulin leads to high levels of ketones, elevated glucose, dehydration and low blood pH (metabolic acid)
- Very Sick

## **NUTRITIONAL KETOSIS AND SODIUM (body's salt) REGULATION**

- Traditional thinking to limit dietary sodium (salt) does NOT apply
- You need 2-3 g of dietary sodium daily if you do NOT have CHF (heart failure)
  - Note: insulin promotes sodium and water retention
  - Insulin lowering low carb ketosis diet → increased kidney sodium excretion (peeing out salt) → diuresis (water loss)
  - Ketones bodies are also mild diuretic (water loss)

## **NUTRITIONAL KETOSIS AND MUSCLES**

- Glucose is stored in muscles for ready energy as 'glycogen'. Water is stored with glycogen to keep the glycogen stored in liquid form for immediate availability.
- When glycogen is utilized, water is released; If insulin is low, then this water also drains out through the kidneys.
- These regulation processes of insulin, glycogen and sodium may attribute to the *rapid initial weight loss as water weight, and also the low energy and flu like symptoms which may be present the first few days while adapting.*

## **NUTRITIONAL KETOSIS WEIGHT LOSS VS STARVATION**

- Similarities:
  - no (or little) intake of dietary carbs
  - shift from use of fatty acids & glucose as fuel toward use of fatty acids and ketones as fuel.
- Starvation: the body's fuels (muscle protein, glycogen, and fat) are used as energy supplies resulting in significant loss of muscle mass.
- Nutritional ketosis (carb restriction but NOT calorie restriction) dietary protein & fat provide energy along with the body's glycogen and fat *if caloric expenditure exceeds calorie intake.*
- With adequate protein intake a very low-carb diet with nutritional ketosis may preserve lean body mass even during loss of fat mass.
- In nutritional ketosis, blood glucose levels are maintained and breakdown of lean body/muscle mass is minimized.

## **NUTRITIONAL KETOSIS AND ALCOHOL**

- Alcohol gets used as fuel before ketones – thus less fat burning
- Alcohol does have calories



- Alcohol is a carbohydrate (beer and wine) and is often combined with carbohydrates (juice, carbonated drinks)
- Alcohol lowers inhibitions, so makes you more likely to eat carbs, eat too much, and may impair judgment
- In later phases 'hard' liquors can be added back in small amounts, 'straight up' but is NOT recommended

## **ATTAINING NUTRITIONAL KETOSIS**

- Carbohydrate Restriction,
  - Very Low Carb Diet: typically limited to 20-50 grams/day -> ketosis
  - Low Carb Diet: 50-150 g/day -> but MAY NOT reach ketosis
  - Urinary ketones – indicator of fat oxidation (breaking down fat)
- Dietary Carbs activate insulin secretion and thus fat storage

## **EXPECTED RESULTS OF NUTRITIONAL KETOSIS**

- ↑HDL (good cholesterol)
- ↓Triglycerides
- ≈ LDL (bad cholesterol)
- Weight loss 5-12 kg (11 – 27 lbs) over 6-12 months

## **SIDE EFFECTS**

### **During Adaptation (first few days/weeks):**

**Weakness**

**Fatigue**

**Lightheaded**

**Headache**

**Frequent urinary water loss**

PREVENTION of above symptoms:

2-3 g/day of sodium – eg bouillon/broth

Dietary potassium

AVOID increase in physical exercise at this time. Do continue same level you are used to doing. Always AVOID being totally sedentary (couch potato)

**Gout**

Signs and symptoms: red hot very painful swollen flaired up arthritis usually of the big toe, sometimes the knee or other joints

Body ketones and uric acid compete for release in kidney, thus you may have less

uric

acid excretion leading to gout. This risk resolves in time to normalizing of uric acid excretion.

PREVENTION:

Adequate fluid intake

Consider allopurinol for prevention  
Consider NSAID and/or colchicines for treatment  
Long term nutritional ketosis reduces risk for gout (by reducing Metabolic syndrome)

**Cholesterol increase**

Transient from blood cholesterol from adipose (fat) release and from Biliary (gall bladder) release of cholesterol.

**PREVENTION:**

Avoid checking cholesterol (lipid profile) lab within first two weeks Of ketogenic diet

**Cholestasis (gall bladder issues)**

Symptoms: pain in right upper abdomen or right shoulder blade especially worse After eating fats or large meals. May be associated with nausea and even Fever is becomes inflamed. May require surgery if inflamed

(cholecystitis).

Also may note light colored stools, dark colored urine, and skin And eye whites yellowing (jaundice)

Presence of gall stones or sludge, and obesity state predispose to problems

Rapid weight loss predisposes to problems

Fat in diet causes the pancreas to contract causing pain and possible lodging of

stone

Into duct thus blocking the duct

**PREVENTION:**

>20 g of fat/day via diet

Ursodeoxycholic acid (Actigal) for cholelithiasis (gall stone attack)

prevention

**Hair loss (telogen effluvium)**

Transient, self limited

Fatty acid Omega 3 (fish oil) supplementation may be helpful

**Bad breath**

From ketones – ketone breath

May use water and limited use of sugar free mints of gum

**Menstrual changes**

Transient

Women may experience new or more menstrual periods, or no periods

**Weight loss > 3 lbs/wk**

Inappropriate diuresis (losing water, water pill)

?Non-adherence to prescribed diet – perhaps not eating enough

**Hypoglycemia (low blood sugar)**

see medication management

Signs and symptoms: anxious, headache, shaky, sweaty, nausea,

Irritated/frustrated, don't feel well

**Hypotension (low blood pressure)**

see medication management

Signs and symptoms: lightheaded, dizzy, worse when going from sitting/lying to standing

**Dehydration**

see medication management

less urine/dark urine, lightheaded/dizzy, dry mouth, thirsty

**Changes in warfarin (Coumadin) labs**

From changes in dietary vitamin K from colorful vegetables

See medication management

Symptoms: easy bruising, minor bleeding eg when brushing/flossing teeth

**After first few weeks:**

**Constipation** (low fiber, dehydration)

PREVENTION:

minimum 2 Liter/day water

1 tsp milk of magnesia (MOM) daily

Bouillon supplementation or carb free fiber supplement

**Muscle cramps**

PREVENTION:

Stop 'water' diuretic pills (usually used for hypertension or edema)

More common in prior heavy alcohol use – avoid alcohol

Milk of magnesia or slow release Magnesium chloride supplement may help

Include potassium in diet.

## **MEDICATION MANAGEMENT:**

### **INSULIN**

Your VA endocrinologist and primary care will be notified that you are on this diet

Monitor your blood sugars closely

Long Acting, if less than 20 Units/day

STOP the insulin in the evening before starting the diet

Decrease all other insulin doses by half on the first day of the diet

When fasting glucose is less than 200 mg/dl, decrease insulin dose by 1/3 to 1/2 again.

Repeat until insulin dose is below 10 units, then discontinue insulin

Call if blood glucose is above 250 mg/dl to see if anything else needs to be done

(attn Dr Ferguson, NW clinic phone 791-9020)

### **GLIPIZIDE OR GLYBURIDE, other diabetes medicine including ACARBOSE (except METFORMIN)**

Monitor your blood sugars closely

STOP all oral diabetic medication except metformin the day the diet is started

Continue metformin until fasting blood glucose is <100 mg/dl

Call if blood glucose is above 250 mg/dl to see if anything else needs to be done

(attn Dr Ferguson, NW Clinic phone 791-9020)

### **DIURETICS (HYDROCHLORITHIAZIDE – HCTZ, FUROSEMIDE, SPIRONOLACTONE) -water pills**

Monitor your blood pressure. If you need a home blood pressure cuff, ask Dr Ferguson

To order one with teaching through Prosthetics dept. Will need arm

Circumference measurement.

If blood sugars are 'at goal' range, then stop water pills as soon as urinary ketones

Are noted on urinary ketone strip testing

If blood sugars are elevated, then only reduce water pills (take half) IF blood pressure is low

Once off the water pills and without edema (swelling), begin 2 bouillon servings daily

As needed up to every 4 hrs to treat lightheaded, fatigue, headache

### **ATENOLOL, METOPROLOL ANTI-HYPOTENSIVES – blood pressure medications**

May begin to reduce beta blockers (atenolol, metoprolol, carvedilol) once off water pills and

IF NOT needed for heart rhythm control.

Beta blockers may slow metabolism and block fat break down (lipolysis)

### **WARFARIN (Coumadin)**

Follow adjustments from pharmacy or whomever is monitoring your dosing

Will stabilize as you stabilize your diet with foundation and other vegetables

### **ORLISTAT (Xenical / Alli)**

STOP taking; you won't need a fat blocker on a nutritional ketosis diet. You will be needing all your fats as primary source of energy! Do NOT combine orlistat low fat and low carb diet!!

QUICK REFERENCE FOR SYMPTOM CONTROL  
LOW CARBOHYDRATE  
NUTRITIONAL KETOSIS DIET

SYMPTOM	DIET	SUPPLEMENT	MEDICATION	SYMPTOMS OR COMMENT	URGENCY
<b>Hunger</b>	Protein Fat Water Snack / meal	Protein shake Whey or soy supplement Fiber supplement	Phentermine	Stomach growling Hunger pangs	Avoid skipping meals
<b>Cravings</b>	Eat if on the plan Count carbs, may be going overboard too high		Bupropion	Delay Distract Reduce carbs if craving sweets	Small lapses in carb intake will make cravings and hunger worse and result in weight regained!
<b>Breath Odor</b>	Limited Sugar free candy	Mouthwash, don't swallow		Floss and brush teeth daily. Rinse well	Check to be sure you are NOT in moderate/high level ketones
<b>Weakness, low Energy, Fatigued</b>	Foundation vegetables Water Protein and fat	1 g sodium broth /bouillon	Stop diuretics 'water' pill May need to reduce other meds Check blood sugars, if too high may need to resume diabetes meds	Avoid skipping meals	If also chest pressure, shortness of breath, unresolved with rest, sudden onset, consider heart attack or heart rhythm disorder. Call 911

<b>SYMPTOM</b>	<b>DIET</b>	<b>SUPPLEMENT</b>	<b>MEDICATION</b>	<b>SYMPTOMS OR COMMENT</b>	<b>URGENCY</b>
<b>Dizzy / Lightheaded</b>	Avoid skipping meals		Check blood pressure and pulse, may need less blood pressure medicine	Check blood pressure Get up more slowly from sitting/lying position	Passing out – lie down, call 911, elevate legs
<b>Weak with Exercise</b>	Pre-exercise snack using foods on the diet	1 g sodium broth within 1 hr prior to exercise	Check blood pressure and pulse, may need less blood pressure medicine	Avoid starting or increasing your current exercise regimen during induction	See if symptoms resolve at rest. If also short of breath, chest pressure etc then call 911.
<b>Shaky / Irritable</b>	Eat meal/snack on the diet		Monitor blood glucose and diabetes meds – may need to reduce or stop diabetes medication	Check blood sugars – may be too low	IF Low blood sugar <90 with symptoms, drink/eat sugar, lie down, call 911
<b>Headache</b>	Drink water Drink coffee (caffeine helps)		Otc pain medication	Check blood sugar	If combined with weakness or vision changes consider stroke and call 911

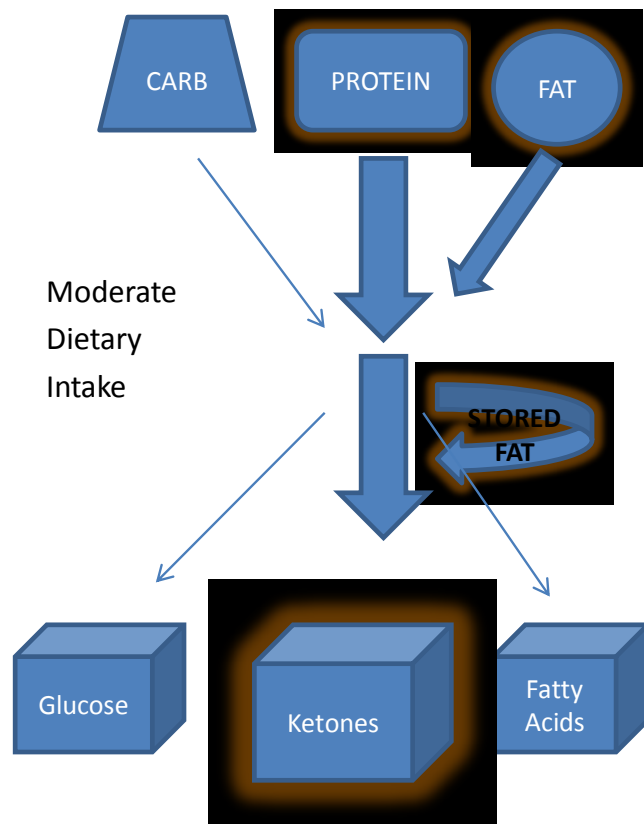
<b>SYMPTOM</b>	<b>DIET</b>	<b>SUPPLEMENT</b>	<b>MEDICATION</b>	<b>SYMPTOMS OR COMMENT</b>	<b>URGENCY</b>
<b>Negative Ketones on urine check</b>	Recheck adherence with low carb diet, count carbs			Assess for hunger and cravings Check blood sugars, too high will interfere with ketones May be kidney 'keto' adapted or using up ketones in exercise	
<b>Palpitation / Irregular Heart</b>	Reduce caffeine Drink more water Foundation vegetables	Sodium broth / bouillon	May need to resume beta blocker blood pressure meds eg metoprolol, atenolol, or carvedilol	May need thyroid check May need electrolyte lab check May be accompanied by cramps Relax / relaxation techniques	If also lightheaded or short of breath call 911
<b>Constipation</b>	Water Foundation vegetables	Fiber, eg sugar free Metamucil + water	Otc Docusate daily Otc Milk of magnesia as needed, daily or 2-3x/wk OK	No bowel movement x 3 days bloating	If also nausea or vomiting, and abdominal pain, consider bowel obstruction and call 911

<b>SYMPTOM</b>	<b>DIET</b>	<b>SUPPLEMENT</b>	<b>MEDICATION</b>	<b>SYMPTOMS OR COMMENT</b>	<b>URGENCY</b>
<b>Swelling</b>	Protein	Reduce broth bouillon intake	May need to resume diuretic 'water' pill	Check blood pressure, may be elevated. Wear compression stocking	If also short of breath, consider heart failure or kidney failure and seek medical attention
<b>Gout attack</b>	Less meat protein More water		Allopurinol for prevention Colchicine and naproxen for acute episode	Red swollen very painful toe	
<b>Gall bladder attack</b>	Stop food intake Drink water		Ursodiol to prevent	Pain in right upper abdomen or right upper back. Nausea. Yellowed skin, dark urine. Will need ultrasound or CT scan	Seek urgent medical attention especially if pain plus fever and nausea

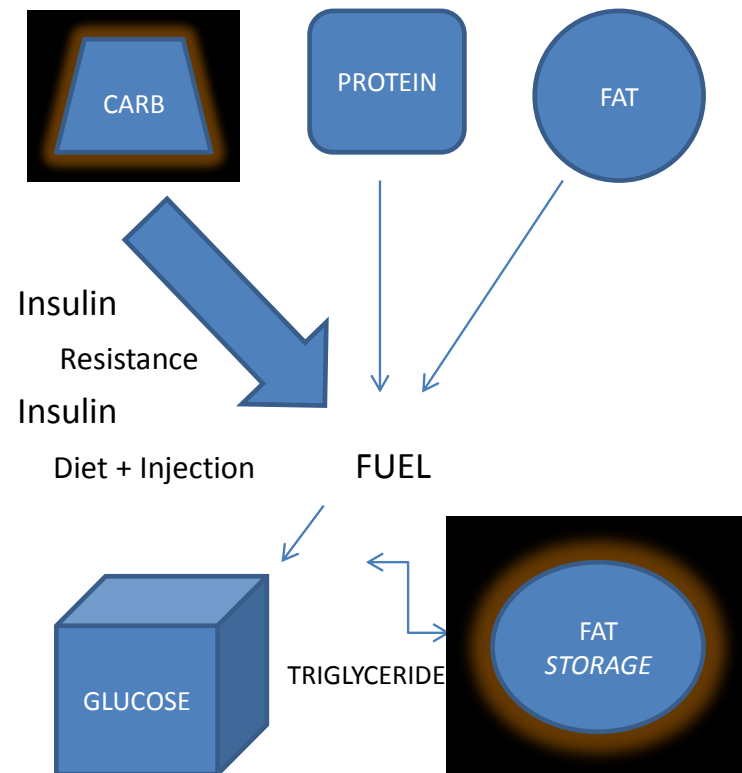


# Mechanism of Energy

## Low Carbohydrate Diet



## Low Fat Diet





***MOVE  
LOW CARB  
PROGRAM  
Week 2***



## ***MOVE LOW CARB PROGRAM***

### ***Week 2***

#### **Sugar**

In the last 40 years, intake of sugar has increased to improve palatability of foods when fat was reduced. And the intake of high fructose corn syrup has increased dramatically since 1975.

The increased intake of sugar in the American diet has been linked to increases in hypertension, inflammation, insulin resistance, high cholesterol, high LDL cholesterol (the bad cholesterol) and lower HDL cholesterol (the good cholesterol), along with obesity.

More and more scientific research is being done regarding the mechanism of action of increased sugar in the diet. The increase of fructose intakes, especially from soda and other beverages, may help explain some of the 75 million cases of metabolic syndrome in the U.S.

#### Simple carbohydrates create chemical imbalances in the body:

- 1) Lowers adiponectin; adiponectin helps burn fat for energy;
- 2) Increases ghrelin (hunger hormone) – so you are hungry all the time;
- 3) Increases insulin production making it difficult to burn fat (insulin traps fat in your cells so that it cannot be used for fuel);
- 4) Increases blood pressure;
- 5) Increases triglycerides – triglycerides are stored as body fat and in the liver;
- 6) Increases LDL Cholesterol (bad cholesterol) causing atherosclerosis;
- 7) Lowers HDL Cholesterol (good cholesterol) – you want this one higher because it helps remove plaque from arteries.

#### **Artificial Sweeteners and Fructose**

The increased use of artificial sweeteners correlates with weight gain according to the experts. Research is also pointing the finger at the negative side-effects of sugar-substitutes with poor blood sugar control for the diabetic population. Many Americans have fructose malabsorption and half of them have adverse reactions such as bloating, diarrhea, or irritable bowel syndrome. Fructose malabsorption ends up with reduced tryptophan availability which creates a vicious cycle for sugar cravings. Temporary relief may be experienced, but long term tends to result in depressed mood and gastrointestinal disturbances. Fructose malabsorbers had remission of symptoms when fructose and sorbitol were reduced.

<b>CARBOHYDRATES Mechanism of Action</b>	
<b>COMPLEX CARBOHYDRATES</b>	<b>SIMPLE CARBOHYDRATES</b>
Digests slowly (2-3 hours)	Digests quickly (2-3 minutes)
Makes you feel full longer	Stomach empties quickly – feel hungry
High in Vitamins and Minerals	Low or NO Vitamins and Minerals
High in Fiber	Low or NO Fiber
Burns calories efficiently	Stores calories
Improves energy levels	Slows metabolism
Improves metabolism	Difficult to mobilize body fat for fuel
	Causes fluid retention (condensation)
	Depletes vitamins and minerals
	Dislipidemia <ul style="list-style-type: none"> <li>- lowers good cholesterol (HDL)</li> <li>- raises bad cholesterol (LDL)</li> <li>- raises triglycerides</li> </ul>
	GI disturbances (constipation and/or diarrhea)
	Tired – low energy levels
	Creates chemical imbalances in the body

**Complex Carbohydrates**  
**(healthy choices)**

Legumes (dried beans & peas)  
Vegetables  
Whole Grains

- Whole Wheat
- Oatmeal
- Corn
- Grits
- Buckwheat
- Bulghur or Cracked Wheat
- Brown Rice

Whole Grain Flours (breads/pasta/cereal)

- 100% Whole Wheat Flour
- Buckwheat Flour
- Oat Flour
- Brown Rice Flour
- Corn Meal or Corn Flour

Yams & Sweet Potatoes

**Simple Carbohydrates**  
**(unhealthy choices)**

White Sugar  
Brown Sugar  
High Fructose Corn Syrup  
Sweets – in general  
Fruit (limit 2 per day)  
Fruit Juice (avoid)  
Honey  
Milk (limit to 8 oz/day)  
Alcohol  
Refined grains

- White Rice
- White Flour Products
  - bread made with white flour
  - pasta made with white flour
  - cereals made with white flour
  - pastries/baked goods w/white flour

Potatoes

- white, russet, red

## ***CLINICAL COMPLICATIONS of a High Carbohydrate Diet***

Simple Carbohydrates (sweets) can create the following problems:

- Iron Deficiency Anemia
- Depleted Zinc stores
- Depleted Vitamin B1 (Thiamin)
- Depleted Vitamin B6 (Pyridoxine)
- Depleted B-complex Vitamins
- Depleted Calcium
- Depleted Chromium
- Fluid Retention (edema)
- Excessive Carbon Dioxide Production in the Lungs
- Increased Shortness of Breath
- Increases Triglycerides and LDL (bad cholesterol) and lowers HDL (good cholesterol)
- Fatty Liver
- GI Disturbances such as constipation and/or diarrhea



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## MOVE LOW CARB PROGRAM WEEK 2

Continue discussion of medication and symptom management during the body's transition to ketogenic diet. See handouts and charts week 1.

You are at highest risk of gout and gall bladder attack during this first 2 week transition! Again refer to handouts week 1.

You should have experienced 'Atkins flu' or muscle aches and fatigue along with significant water weight loss. Your blood sugar control should be much improved already.

Note: Your brain on ketones. You may be experiencing a lift in depression, an uplifted mood, more mental energy! Sugar can drag you down making you lethargic. See your yourself if diet makes a difference 😊.



***MOVE  
LOW CARB  
PROGRAM  
Week 3***



## ***MOVE LOW CARB PROGRAM***

### ***Week 3***



### **WATER – Drink Up !**

Water has major functions in the body. Drinking enough water is an important part of a healthy lifestyle and a successful weight management program.

#### **Here are some tips:**

- Sometimes, we feel hungry when we are actually dehydrated.
- Don't wait for thirst! When you feel thirsty, you have already lost water.
- Always keep a water bottle with you.
- Take "water breaks" throughout the day.
- Drink decaffeinated beverages or plain water with meals.
- Don't skip the water fountain – always take a sip.
- If you like cold water, keep a water pitcher in the refrigerator for refills.

#### **How can you make sure you get enough water?**

- Check your urine – it should be clear and light-colored.

#### **Dehydration: The Warning Signs:**

- |                             |                      |
|-----------------------------|----------------------|
| - Nausea                    | - Hoarse voice       |
| - Vomiting                  | - Constipation       |
| - Headaches                 | - Restlessness       |
| - Elevated body temperature | - Muscle cramps      |
| - Dry lips and tongue       | - Dark colored urine |
| - Dry skin                  | - Light-headedness   |
| - Water retention problems  | - Loss of energy     |
| - Muscle or joint soreness  | - Confusion          |



#### **How much water do we need?**

- The average adult loses about 2½ quarts (about 10 cups) of water each day. Therefore, drinking approximately 8-12 cups throughout the day is sufficient. If you have problems with fluid retention, check with your doctor or dietitian for the appropriate amounts.
- Heat, activity and diet (high protein intakes, caffeine, alcohol) can increase your water needs.

- The easy way to calculate your fluid needs is by taking your weight in pounds and divide by 2 = oz. of fluids/day.

### EXAMPLE

**Weight in pounds ÷ 2 = number of ounces of fluids/day**

*Example: 200 lbs ÷ 2 = 100 oz. fluids per day*

**Make 80% from Water and 20% Other**

*Example: 100 oz. fluids per day*

*Ratio 80/20 = 80 oz. water & 20 oz. other*



### References

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“Fluid Needs,” The Clemson University Cooperative Extension Service, Clemson University cooperating with the U.S. Department of Agriculture, South Carolina, Sept. 2005.

L. Lee Coyne, PhD, “Water for Health and Performance,” at e-mail [dr.coyne@shaw.ca](mailto:dr.coyne@shaw.ca) or by phone 1-800-668-4042.

## Water and Salt

According to the authors of *The New Atkins for a New You*, “a low carb diet is naturally diuretic, which flushes sodium and water from your body (pages 19 and 96).” You will excrete more salt along with fluid and you should start feeling more comfortable as a result (no more fluid bloat). But excessive fluid loss can lead to dehydration, so it is important to get adequate water and salt back into your routine.

### Symptoms of sodium deficiency:

- Fatigue
- Light-headedness
- Weakness
- Constipation
- Chronic headaches
- Leg cramps

### Symptoms of dehydration:

- Fatigue
- Light-headedness
- Weakness
- Constipation
- Chronic headaches
- Leg cramps
- Confusion
- Dark colored urine
- Nausea/vomiting if severe dehydration

Some people are more sensitive to salt and may experience bloating and high blood pressure if they eat too much salt. However, these conditions are more pronounced from high carbohydrate intakes. As the body adapts during the induction phase of the program you should start to notice a fluid shift; in other words, retained fluids will start to diminish.

### **Solutions**

1. Drink adequate water to prevent dehydration. Strive for at least 3 qts/day, more if needed.
2. Do not over-drink fluids; this can unnecessarily deplete sodium, magnesium and potassium.
3. Keep sodium intakes between 3000-4000 mg/day; the addition of 1-3 cups of broth daily should help prevent sodium depletion. This is a modest amount of sodium and does not represent a high sodium diet. The addition of adequate sodium “is one of the many science-based changes in Atkins.”
4. If you are salt sensitive in the beginning – cut broth intakes to 1 cup instead of 2 or 3 cups.
5. As your body starts to adapt, you may want to add additional sodium to your food in the form of salt or soy sauce, or continue the broth.

## STICKING WITH IT ADHERENCE TO LOW CARBOHYDRATE DIET (Week 3 MOVE Low Carb Clinic)

Low Carbohydrate Diets have been criticized as being

- Difficult to stick with
- Complications
- Rapid weight regain

Low carbohydrate diets can be ***VERY successful If you stick with it!***

Two Pathways like interstate highways:

- Can't cross between, Can't combine
- Low carb diet vs other diet

Ethnic and genetic best diet for some

Often doesn't fit in today's environment:

- Imprinted low fat diet thinking
- Misinformation
- Carbs cheap, taste good, universally available

**What you need to do** (to be successful long term)

- Food Journal - help yourself, help us to help you
- Carbohydrate counting, net carb counts, you will NEED this skill lifelong
  - HINT: it gets easier since we often repeat what we eat
- Self Ketone checks – goal trace/low levels, if using up ketones for energy i.e. exercise or if elevated blood glucose, then ketones may NOT be positive despite nutritional ketosis
- Monitor 'hunger' – if physically hungry and cravings then you are eating too many carbohydrates – go back to basic – review and reduce, count carbs
- Hunger 'need' vs 'want' to eat – many people eat out of habit, social, stress, boredom or celebration. STOP. THINK. Do I need to eat or do I just *want* to eat. Hunger gets more severe over time. Cravings can often be deflected by delay/distract.
  - Hint – recognize what medications you make that make you hungry and want to eat! Recognize it's the medicine causing the craving; distract yourself, keep a 'safe' environment.

- Avoid 'impulse' eating – putting it in your mouth because it's there, looks good, free etc.
- 'Safe' environment. Keep adequate low carb foods/snacks readily available. Avoid letting yourself get too hungry. Helps avoid impulse eating as well. Know your weaknesses/temptations.
- Consume 3-5 small meals (or 3 meals 1-2 snacks) daily. Include breakfast. If you skip meals (hungry or not) then your metabolism will slow and your weight loss will slow.
- Drink fluids – you will LOSE fluid through increase urine voiding. You are also at risk for constipation and consuming more fiber in vegetables. Drinking fluids can avoid constipation and lightheadedness/weakness/fatigue. Use diet soft drinks and artificial sweeteners sparingly. WATER is your best drink. Also black coffee and unsweetened teas.
- Consume SALT / sodium. This is typically in the bouillon 1-4 cups per day. Adequate salt intake will prevent weakness, fatigue, headache, cramps
- Consume foundation vegetables. You will need the fiber and potassium to avoid constipation and avoid cramps. Find recipes and ways to add them to foods you like, eg soups, lettuce wraps, salads, cooked in eggs/omelets, pre-cut raw snacks with dip etc.
- Water, salt, foundation vegetables can provide nutrients to prevent heart rhythm disorders (irregular heartbeats / palpitations)
- Utilize resources – books, on-line website, carb counting, MOVE staff etc
- Attendance – group learning, learn from MOVE Staff as well from questions from others and discussions.
- Set goals. Write them down. Share your goals with someone. Monitor to check your progress towards achieving those goals. Why are you doing this diet? Remember that you weren't losing weight by traditional meals and you were hungry and tired? Setting a goal to give up carbs/starches/sugars may seem extreme but you need to firmly decide – fully commit!. If it's important to you, then do it!
- "Nothing tastes as good as being thin feels" from Jean Nidetch, founder of Weight Watchers. – sub in 'being off insulin feels' 'being in smaller pant

size feels', 'being able to see my toes feels' etc. Recognize giving up something for to achieve something better.

- Hint: You can also learn to like more vegetables and protein and 'forget' and not miss those sweets.
- Avoid alcohol. Used for energy/fuel instead of fat being used. Also lowers inhibitions for more foods. Most alcohol drinks have carbs (beer, wine) and are often combined with carbs (eg juice or carbonated drink)
- Relapse control. Anticipate problems situations and pre-plan. Recognize that if you consume excess carbs no matter how innocently, you will awaken a ravenous hunger and cravings for carbohydrates. Your weight will be regained very quickly. It will be difficult motivationally to get back into nutritional ketosis.



***MOVE  
LOW CARB  
PROGRAM  
Week 4***



## ***MOVE LOW CARB PROGRAM***

### ***Week 4***

#### **PROTEINS**

Protein food has an important role in preserving lean tissue while promoting fat loss

Protein foods help:

- Increase satiety (sense of fullness)
- Stabilize blood sugar levels
- Burn more calories
  - Digesting and metabolizing protein consumes more than twice the energy (25%) compared to either carbohydrate or fat
- When losing weight – you want to lose body fat, not lean muscle
- You need to consume some protein at every meal, including breakfast;  
ADEQUATE BUT NOT EXCESSIVE
- Approximately 4-6 oz. protein food per meal – or at least 3 x day to adequately meet your needs without being excessive; tall men (74 inches or taller) may need up to 8 oz. protein at each meal\*
- There are NO benefits to eat more protein; studies have shown that increasing protein above 30% of calories can increase blood urea nitrogen (BUN); according to Dr. Volek and Dr. Phinney, authors of *The Art and Science of Low Carbohydrate Living*, “another reason to avoid eating too much protein is that it has a modest insulin stimulating effect that reduces ketone production...higher protein intakes reduce one’s keto-adaptation and thus the metabolic benefits of the diet.”

Healthy protein foods:

- Eggs, egg whites
- Red meat (lean beef, lean pork, lamb, buffalo or other wild game)
- Poultry (chicken, turkey)
- Fish
- Fish high in Omega-3 fatty acids: salmon, sardines, herring, cod
- Plant based proteins: soy based products such as tofu/tempeh; peanut butter; nuts

1 oz. PROTEIN = 7 GRAMS

that’s equivalent to the following:

4-6 oz/meal 3 x day = 84-126 grams/day

8 oz/meal 3 x day = 168 grams/day

\*Body building and weight training may require larger quantities of protein; ask your dietitian to calculate your protein needs if you plan to start a weight training and body building routine.

## PHASE 2

### Ongoing Weight Loss

- Most people spend the majority of their weight loss time in Phase 2.
- We recommend that you stay here until you are only 10 pounds from your goal weight.
- With the freedom to choose additional carbohydrate foods, comes the risk of getting out of your safety zone.
- Here are some tips to help you get started in the transition:
  - Gradually increase your carb intake in 5-gram increments WITHOUT stopping weight loss and/or prompting the return of old symptoms (loss of energy, tired all the time, sluggish, bloated, food cravings, hunger, high blood sugars, etc.).
  - Reintroduce foods in a certain order.
  - Address challenges such as plateaus and carb creeping.
  - Find your personal tolerance for carb consumption in this phase, known as your “Carbohydrate Level for Losing” (CLL).
  - Start moving – integrate more physical fitness into your weight control program.
  - Customize Phase 2 to suit your needs – you can always back off a bit if a new food causes a problem with weight gain or old symptoms.
- Getting started:
  - Increase your daily carb intake by 5 grams
    - 20 grams + 5 grams = 25 grams net carbs/day
  - We recommend that you add nuts and seeds first
  - then berries and a few other fruits
  - then additional dairy choices
  - then legumes (only if you are not gaining back weight)
  - If the sweetness of a few berries (with emphasis on a **FEW**) matters more to you than a few nuts, rearrange the order to suit your preference
  - Add only ONE NEW FOOD WITHIN A GROUP at a time
  - If something stimulates food cravings or causes gastric distress, and interferes with your weight loss journey....you will be able to identify this food and eliminate it from your selections

REFER to “The New Atkins For A New You,” Chapter 8, page 116-141. Review the list of foods allowed for Phase 2.

## SIDE EFFECTS OF SIMPLE CARBOHYDRATES

- LOSS OF ENERGY
- TIRED ALL THE TIME
- WEIGHT GAIN
- SLUGGISH
- BLOATED – FLUID RETENTION
- FOOD CRAVINGS
- HUNGER
- HIGH BLOOD SUGARS
- WEAKNESS
- SHORTNESS OF BREATH
- GASTRIC DISTURBANCES (cramping, diarrhea or constipation)

If these symptoms come back – evaluate what you have eaten that may have caused it – then eliminate that item from your carbohydrate choices.



## LOW CARBOHYDRATE DIETS AND YOUR LAB TEST RESULTS

You are provided with a

- Work sheet of
  - maximum weight and current weight
  - recent blood pressure
  - metabolic lab results prior to starting low carb diet
  - EKG copy attached for your records
- EKG copy for your records
- Weight graph, results since week 3 of low carb diet, results should be in downward slope!

### Background

Nutritional ketosis metabolism takes an alternative route to achieving good health results. If one stays on course with very low (<30 grams/day) and low carbohydrate (<80 grams/day) diet the results are very promising.

In short you are burning fat ketones for fuel, calling upon fat stores (lipolysis) and triglycerides to kindle the energy/metabolism fires. This also causes transient build up of uric acid until the kidney gets adapted to 'letting it go'. This adaptation also causes greater release of sodium/salt via the kidneys thus losing body water and lowering blood pressure. Muscles see less glycogen storage (so may ache initially) and with glycogen stores getting 'used up' thus again releasing excess water stored in muscle and other tissues. Of note the fat stored also gets 'used up'. This is the fat that is associated with insulin resistance, metabolic syndrome, fatty liver and impaired muscle function

### Weight Loss and Fluid Shifts

The **rapid weight loss** initially is often excess water. When water continues to be lost, it can lead to dehydration. Thus stopping diuretic blood pressure 'water' pills and consuming bouillon/broth (salt and water) become necessary. See your weight loss graph and weight loss results. **Uric acid** can be temporarily elevated predisposing to gout. Gall bladder problems can be activated by rapid weight loss as well. Allopurinol can be prescribed to prevent gout in those with elevated uric acid to prevent gout. Ursodiol can be prescribed to prevent gall bladder attacks in those with known prior gall stones or sludge.

Routine testing for gall bladder health is usually not feasible in people with obesity since a good ultrasound exam cannot be done due to the extensive abdominal fat. **Liver labs** are often mildly elevated for many reasons, typically fat in the liver, medications, prior hepatitis B or C, or alcohol use (which no one is drinking alcohol on low carb diet!) . Marked elevation is of concern and may be associated with dark urine, yellowed skin (jaundice), easy bruising, abdominal fluid retention (ascites), abdominal varicose veins, other liver and gallbladder problems.

### EKG, Blood Pressure, Pulse

EKG, blood pressure checks, and pulse checks are done due to increased risk for **heart rhythm** disorders as fluids and electrolytes shift. Dietary salt (bouillon), potassium from vegetables and lots of fluid intake help keep fluids and heart rhythm balanced. While most people with obesity and related medical conditions do have abnormal baseline EKG tests, the heart rhythm is the greatest concern on very low carbohydrate diet. Signs and symptoms of heart rhythm abnormalities include rapid pulse, palpitations, shortness of breath, lightheaded, and/or low blood pressure.

**Baseline EKG** taken on a day you are feeling normal (no chest pain) is useful to establish a baseline ‘normal’ for you. It may also expose a possible past heart attack or electrical block. Beta blocker drugs (atenolol, metoprolol, carvedolol) slow the rhythm and may cause slow heart rate (bradycardia). Normal ventricular rate (heart rate) is 60-100 beats per minute. If you DO develop chest pain or heart symptoms or problems, then the baseline EKG is an important comparison tool, which is why you have been provided your own copy.

It is a good idea to check your **blood pressure** daily. Blood pressure represents the flexibility (lack of hardening) of the arteries. Stiff arteries are more prone to poor circulation, heart attack, stroke, kidney disease, and blindness. The high number (systolic) represents the artery blood pulse; The low number (diastolic) represents the artery at rest. Goal blood pressure is less than 120/80 (systolic/diastolic). Some people have blood pressure more sensitive to salt intake. High blood pressure typically has no symptoms. When not controlled by low salt diet, exercise, and weight loss, then medications may be started. Exception to low salt diet is a low carb (nutritional ketosis) diet where so much salt is lost naturally in the urine that you must replace it eg with bouillon (fluid and salt). Blood pressure medications must be taken every day. If you need a

home blood pressure cuff, then leave a message in writing for Dr Ferguson. Your arm circumference will be needed as well to determine the cuff size.

### Blood Glucose, Hemoglobin A1c, and Insulin

Low carbohydrate diet rapidly lowers blood sugars and ‘quiets’ the body’s insulin secretion and exogenous (injected) insulin needs.

For diabetes, **glucose** control is monitored by finger stick testing. Goal is finger stick testing of 100 – 130 mg/dl prior to meals. At no time should blood sugars go above 200. While adjusting insulins, glipizide and other diabetes meds in addition to low carb diet, the goal is to maintain a ‘safe’ blood sugar between 100-150. Avoid any emergency low blood sugar.

Symptoms of low blood sugar (hypoglycemia): lightheaded, dizzy, confused, shaky, sweating, irritable. Coma and death can result from low blood sugar! You may be diabetic medication overdosed! Also do eat small low carb balanced meals/snacks every 3-4 hrs to maintain energy balance. During low carb diet and while sleeping, the liver manufactures glucose thru a process called gluconeogenesis. In people with normal blood sugars (no diabetes) a low carb diet can be used to prevent diabetes and prevent metabolic syndrome. It’s the glucose lowering diabetic medications such as insulin and glipizide that will cause blood sugars to go too low. Do be aware of exercise lowering blood sugars too.

High glucose (sugars) place you at risk for dehydration, poor healing, bad circulation, blindness, amputation, kidney disease, sexual impotence, and heart attack. Most people with diabetes lose their lives from heart attacks or other cardiovascular events.

Carbohydrate foods raise blood sugar and if triglycerides if not burned up as energy needs. Carbs raise blood sugar → raises insulin → lowers blood sugar → make you anxious and hungry. Low carb diet breaks this cycle.

Check your blood sugars daily. IF you need additional diabetes supplies the first month of low carb diet, write the specific supplies/brand that you need as a message for Dr Ferguson.

**Hemoglobin A1c** represents the sugar within the red blood cells over the past 2-3 months. Normal is less than 6.0. Goal for a patient with diabetes is less



than 7.0. If the hemoglobin A1c is greater than 9, this represents very poor control and high risk of diabetes complications.

This test represents the overall, long term control of your diabetes. It may be repeated every 3 to 6 months, depending upon your level of control

Exercise and diet is a very powerful tool and may lower your overall glucose control even more than medications. Weight loss, low carb diet, and exercise may eliminate the need for medications.

Diabetes is a “coronary heart disease risk equivalent”. This means the risk for heart attack is same as risk for those who have already had their first heart attack – markedly increased. That is why people with diabetes are treated with same guidelines as patients who already have known heart disease. NOTE, people with diabetes may have deadening of the nerves and may not feel a heart attack as intensely as non-diabetics. Their symptoms may be more pressure, shortness of breath, and nausea, and indigestion - NOT necessarily pain. These symptoms may also be true for women with or without diabetes.

Anemia (low hemoglobin) may effect the Hemoglobin A1c results.

A very low or low carbohydrate diet even with or without exercise is expected to greatly lower blood glucose, lower hemoglobin A1c, plus mobilize stored fat and triglycerides for energy. Since insulin encouraged fat stores, less insulin encourages less new fat to be stored.

In a person who does NOT have known diabetes, a **fasting blood insulin** level is useful to assess the ‘challenge’ on the pancreas. The pancreas secretes insulin to maintain stable blood sugars. Increased insulin levels signal that the pancreas is working ‘overtime’, i.e. diabetes will happen with the pancreas ‘fatigues’.

Insulin is the carrier or driver of glucose from the blood into the entire body’s cells (muscles, organs,...). Type II diabetes is associated with insulin resistance meaning the cell walls become less receptive to sugar, thus it takes more insulin to bully glucose out of the blood and into the cells. Excess glucose in cells (when not used up in exercise/activity/metabolism) becomes stored as fat (lipogenesis). Fat cells too become overwhelmed and fat becomes stored in liver, in muscles, around organs etc impairing their function.

Recall that carbs raise blood sugar → raises insulin → lowers blood sugar → make you anxious and hungry. Low carb diet breaks this cycle.

In a person who already has Type II Diabetes, insulin levels would be expected to be low/insufficient because now the pancreas is worn out and can't produce enough insulin to control blood sugars. Diabetes medicine (eg glipizide) ramps up a tired pancreas to squeeze out a little more insulin to reduce blood sugar. After a while even this won't work and so exogenous (injected) insulin is used. Metformin doesn't effect insulin directly, it reduces the cell's insulin resistance (as does exercise and weight loss). Acarbose works to help break down the carbs you are ingesting orally so it too has little/no direct effect on insulin.

Reducing dietary carbohydrates does have a direct effect on lessening insulin and the work of the pancreas.

### Lipid Profile

**Total Cholesterol** goal is less than 200, however the components of HDL (good cholesterol) and LDL (bad cholesterol) are more useful. Elevated cholesterol increases your risk of heart attack and stroke, especially elevation of LDL cholesterol.

Low carbohydrate diet may initially transiently raise blood cholesterol in the first 2-4 weeks. This is due to more mobilization of fat stores while switching to ketone burning.

**LDL** is the 'bad' low density 'fluffy' cholesterol that clogs arteries. If you have any risk factors for heart attack and stroke (and excess weight IS a risk factor), then your goal LDL is less than 100. If you already have a history of heart attack or stroke, your goal LDL is less than 70.

LDL represents risk of plaque on the walls of your arteries. The plaque may become inflamed or just too thick and detach itself, leading to artery blockage. The plaque blockage stops blood and oxygen from reaching the tissues in the heart and brain. This is the cause of most heart attacks and stroke. Lowering the LDL lessens the chance for plaque. Lower LDL is achieved by diet, exercise, weight loss, and medications. 'Statin' medications like simvastatin, atorvastatin, lovastatin are examples of cholesterol lowering drugs. Medications must be taken every day. High cholesterol has no symptoms until your first attack.

While some are concerned that eating low carb (high fat) diet may raise LDL, this has not been shown to be the case. Typically LDL is expected to remain

stable (with exception of transient elevated in the first 2-4 weeks) on a nutritional ketosis diet.

**HDL** Cholesterol is the ‘good’ high density cholesterol because it binds up the LDL bad cholesterol, deactivating it. Women typically have higher levels. Goal for men is greater than 40; Goal for women is greater than 50. Higher is better. HDL is more difficult to influence and is increased by genetics, exercise, healthy diet, and some medications.

Statin medications have minimal effect; fish oil (Omega 3) has some effect. Low carbohydrate diet has been shown to increase HDL which is the direction you want it to go.

**Triglycerides** are very closely related to diet. High alcohol consumption can also lead to increased triglycerides. High triglycerides are an independent risk factor for heart attack and for pancreatitis. Goal is less than 150. Eating fish (non deep fried) and taking Omega 3 fatty acid supplement may help lower triglycerides.

A low or very low carbohydrate diet uses triglycerides and mobilizes body fat to make ketones for fuel. Triglycerides levels are expected to markedly decrease on a nutritional ketosis diet.

### Inflammation

Elevated **C-Reactive Protein (CRP)** is a sign of inflammation/irritation in the blood vessels. Inflammation may be from infection, arthritis, excess weight/central obesity, wounds, or stress. Inflammation loosens plaques as discussed above under LDL cholesterol, leading to heart attack and stroke. Goal is less than 3.0. CRP can be reduced by loss of weight, control of infection/arthritis, taking of 325 mg aspirin daily, consuming fish high in omega-3 fatty acids (salmon, mackerel, sardines, tuna), a glass of red wine per day, colorful &/or leafy vegetables, whole grains and stop all tobacco. Healing of wounds/infections, floss teeth daily, and weight loss are recommended.

Low carbohydrate diet reduces CRP, primarily thru less sugar and simple carbohydrates but also via weight loss. Avoid the red wine or beer on low carb diets.

**Uric acid** and elevated white blood cell counts are additional lab markers of inflammation.

### Kidney

The kidney has many functions including a sensor for body fluid status (hydration), blood pressure, a sensor for electrolytes, a sensor and regulator for acid/base, and a blood purifier/filter. **Creatinine** (Cr) is a spot check marker of the kidney's filtration capacity. 24-hour urine for creatinine clearance is a better test but cumbersome to collect all that urine over 24 hours. Creatinine is merely a screening test and can be affected by lean body mass and by medications you take. Transient ketones may elevate creatinine when starting a very low carb diet.

Protein is a large molecule. If blood protein leaks through the kidney filter and into the urine, this is abnormal. Presence of **Urine Protein** means that the kidney is not functioning as it should. NO protein should be shed into the urine. A more sensitive screening test is the microalbumin where again the goal is NONE in the urine but a small amount up to 20 mg/DL can be normal.

Dietary Protein was thought to be harsh on the kidneys (and liver) in large amounts. In studies people leaving a buffet had transient elevation of liver and kidney labs. Low protein diets were thought in past to protect the kidney. Now we know that small to moderate portions of protein over 3-6 small meals/snacks per day are well tolerated and weight loss can improve kidney functions!

Exercise may cause transient passing of protein into the urine. Avoid collection of urine for testing after exercising as this may cause false positive results.

As noted prior, uric acid may be transiently retained in the body during initiation of very low carb diet. Eventually the kidney becomes trained and more efficient in releasing the uric acid as it should. Elevated blood **uric acid** may cause gout and sometimes kidney stones especially when dehydration exists. Drink lots of fluids to prevent gout and kidney stones. Eat salt (bouillon) when on very low carb diet to replace salt and fluid loss from the kidneys.

When urine shows glucose and moderate/high level of ketones this may be a sign of ketoacidosis. Ketoacidosis is a medical emergency and sign that diabetes is out of control. It requires hospitalization and Liters of IV fluids. Sometimes ketoacidosis is the first sign of diabetes. Glucose (sugar) in urine causes water loss through the kidneys as well. Since the water follows the sugar

out into the urine, the body becomes very dehydrated and the person is voiding urine ‘all day long’. Thirst is a late sign and the body is already depleted.

**Urine ketone** self test kits are encouraged to monitor for ketones in the urine. Goal is to reduce dietary carbs enough that your body switches to the ketone pathway for energy. Ketones will be excreted in the urine and in the breath. Goal for nutritional ketosis is trace to low amounts ( ketones 5-15 mg/dl). Follow the scale designed for low carbohydrate dieter goals on your test kit. Beware that high blood sugars may prevent ketones from appearing. Also taking in carbs will stop or reduce ketones from forming. Everyone’s body is different on the number of carbohydrates they can consume in the diet and still maintain nutritional ketosis. Monitoring diet, urine ketones, ketone breath, and your hunger are all ways to self check for nutritional ketosis. (getting out of nutritional ketosis via too many dietary carbs will cause strong hunger and carb cravings!)

### Exercise

Exercise is a wonderful thing to support your mind and body – your health. Of note when on a low carb diet:

- Muscles are achy at first with fluid shifts, glucose shifts, fat burning shifts, uric acid and salt shifts etc.
- Muscles burn sugar. You will be at greater risk for low blood sugars
- Do consume a light snack and drink 1 cup of bouillon prior to exercise
- Exercise may cause protein or microalbumin to appear in your urine so avoid exercising prior to a lab urine test. Home ketone tests will not be effected.

Future session will be dedicated to exercise while on a low carb diet. At this time now be as active as you are able; Avoid being sedentary (couch potato), ever!

SUMMARY of anticipated lab changes with low carbohydrate diet. Note that medication doses especially for diabetes and hypertension must be adjusted rapidly in accordance with changes in blood sugars and blood pressures. Uric acid may be adjusted by starting allopurinol.

Glucose	Decrease ☺
Hemoglobin A1c	Decrease ☺
Triglycerides	Marked Decrease ☺
LDL	Unchanged, may go up first month if tested

HDL	Increase ☺
Uric Acid	May go up first month, then decrease
CRP	Decrease ☺
Blood Pressure	Decrease ☺
Liver labs	May be unchanged, or initially elevated then decrease
Weight	Decrease ☺

Results from 2 year study, Vernon and Westman

Weight loss	-14%
Triglycerides	-37.7%
HDL	+31.9%
A1c in diabetes	-38%
Blood pressure	-4.7%
Total cholesterol	unchanged (didn't get worse despite eating fats)

***MOVE  
LOW CARB  
PROGRAM  
Week 5***





## ***MOVE LOW CARB PROGRAM***

### ***Week 5***

#### **FATS**

##### The role of fats in healthy metabolism

- Fatty acids are vital ingredients in cell membranes
- Essential fatty acids are necessary for healthy brain function
- They enable nerves and hormonal systems to transmit signals to the rest of the body
- Slows the entry of glucose into the bloodstream – for more stable blood sugar levels
- Increase satiety (feeling of fullness)
- By reducing carbohydrate intakes, your body recovers its capacity to burn fat; as a result, your fat intake can be relatively high without any adverse effects on your weight or health
- When you limit carbohydrate intakes, the calories from fat are used directly for energy and are unlikely to be stored.
- Dietary fat is not burned before body fat; rather, existing body fat stores intermingle with incoming dietary fat; once your body adapts to fat metabolism, some of the “blend” of dietary and body fat burn faster as a result

##### Choose healthy fats:

- Nuts
- Avocado
- Cream \*
- Olives
- Pesto
- Butter
- Mayonnaise
- Vegetable Oils

##### No Trans Fats:

- Fried Foods
- Hydrogenated Spreads/Margarines
- Hydrogenated Peanut Butter

\*Cream can be regular or heavy whipping cream; however, regular cream is preferred as the cholesterol and fat content are significantly different (heavy whipping cream has twice the amount of fats and cholesterol as well as calories). Saturated fats (butter, cream, heavy whipping cream, if consumed in large quantities, have the potential to raise LDL cholesterol (bad cholesterol). The goal is to increase intakes of healthy fats (unsaturated fats like olive oil and canola oil).

## OMEGA 3-6-9 FATTY ACID FOOD SOURCES

### Omega 3 Fatty Acids (Alpha-linolenic acid)

- Fish oil
- Flaxseed oil
- Walnut oil
- Canola oil
- Cod liver oil
- Salmon
- Caviar
- Cod
- Whitefish
- Herring
- Sardines
- Mackerel
- Flaxseed
- Chia seeds
- Spinach
- Walnuts

### Omega 6 Fatty Acids (Linoleic Acid)

- Sunflower oil
- Corn oil
- Sesame oil
- Cottonseed oil
- Grapeseed oil
- Wheat Germ oil
- Olive oil
- Safflower Oil
- Brazil nuts
- Almonds
- Cashews
- Flax seeds
- Hemp
- Sunflower seeds
- Sesame seeds
- Pumpkin seeds
- Pine nuts
- Primrose oil
- Borage oil
- Black current seed oil
- Mayonnaise

### Omega 9 Fatty Acids (Oleic Acid)

- Olive oil
- Peanut oil
- Almonds
- Cashews
- Macadamia nuts
- Pecans
- Peanuts
- Pistachio nuts
- Hazelnuts
- Black Olives
- Hemp
- Avocados

Recommended Ratio (6/9 : 3) to promote anti-inflammatory response: 2:1 to 4:1  
 Current ratio (6/9 : 3) in North America: 15:1 to 17:1

NOTE: Based on scientific research conducted by J.S. Volek, PhD, RD and S.D. Phinney, MD, PhD, authors of “The Art and Science of Low Carbohydrate Living,” more success was achieved using mono-unsaturated fats in combination with animal fats (50:50). Polyunsaturated fats were poorly tolerated (nausea, stomach ache) when consumed in larger quantities necessary to maintain a low carb diet plan.

Monounsaturated fats: Olive oil, canola oil, avocados, peanut oil, nuts and seeds  
 Polyunsaturated fats: Oils from corn, peanuts, safflower, soy, sunflower, walnut

LDL Cholesterol. Low Density Lipoprotein (LDL) cholesterol is commonly referred to as the “bad cholesterol” as it has the reputation for building plaque in arteries. During a low carb diet plan, LDL has the potential to either remain the same, or increase slightly. There are 2 reasons for this: 1) increased saturated fat consumption and 2) weight loss – burning body fat will release some LDL cholesterol into the blood stream; “once a person’s weight loss ceases, this expulsion of cholesterol stored in adipose tissue stops and serum LDL cholesterol returns to its new post-weight-loss baseline.” Bottom line – if your LDL cholesterol remains slightly high – and you are keto-adapted – you will utilize this fat for fuel; so there is no need to be alarmed. When in doubt, rely on mono-unsaturated fats more frequently, just be sure to get enough in your daily intakes.

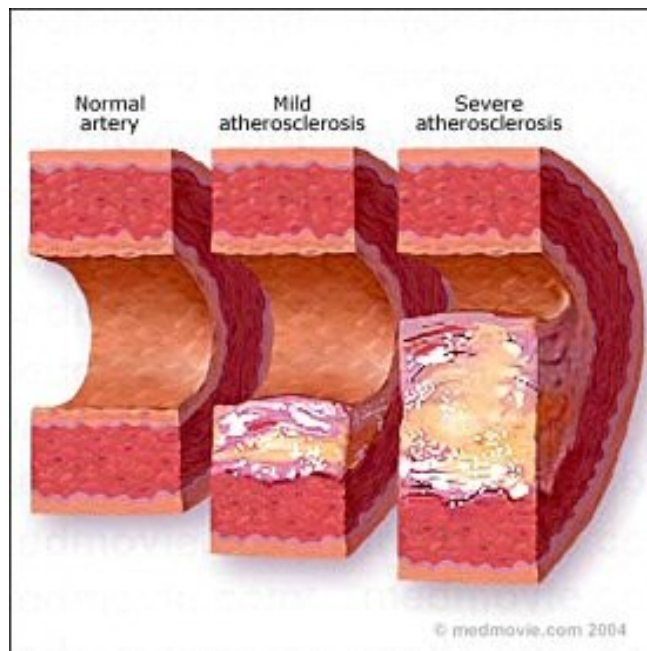
## LOW CARB TRANSITIONING

### Phase 1 (Induction) and Phase 2 (Ongoing Weight Loss)

- Nutritional Ketosis (keto-adapted)
- Fats are primary fuel source
- Fat burning mode
- Fats are metabolized – unlikely to cause problems with clogged arteries

### Phase 3 (Pre-Maintenance) and Phase 4 (Lifetime Maintenance)

- No longer in Nutritional Ketosis
- Carbohydrates are now the primary fuel source
- Fats will likely be stored, if in excess
- Potential for **ARTERY CLOGGING TIME BOMB**
- Important to now switch to unsaturated fats instead of saturated fats to reduce the risk of clogged arteries or cardiac health problems



## SOCIAL CHALLENGES ON A LOW CARBOHYDRATE DIET

“To succeed on any weight loss program, you must decide how to respond to situations that threaten your control *before* you confront them”. The New Atkins for a New You p 77.

- **Goals**

- Set a Goal; Make a Plan to reach that goal, short and long term
- Reasonable
- Doable
- Maintainable/Sustainable (Something you can see yourself sticking with)
- Plan for contingencies – strategies for issues and problems – how will you handle an anticipated difficult situation?
- Begin to know your ACE – i.e your carbohydrate range (wiggle room) and limit – going above gets you out of nutritional ketosis and brings back hunger/cravings!

- **Making Changes**

- Change itself is stressful. Having to rethink every meal, every recipe, every time someone offers you food,... It's a relearning of how to eat! Spontaneous eat whatever is there is gone, but new habits can quickly form.
- Mourning the foods you love and miss. You know you don't NEED them but you want them because you like the taste, it's habit etc eg catsup on a burger, sugar in your coffee, etc. Have faith that you will lose the taste and the missing will lessened in time. You will learn to like and appreciate new foods. You may be able to adapt some most loved recipes.

- **Eating with Others**

- Focus on other people / your friends, etc; revel in compliments on how well you look and your success
- Eat slowly, enjoy the food but also the mood and the social event

- Pre-plan. Know what foods are ‘safe’ and healthy foods to keep you on track.
- Beware of traps “just one bite won’t hurt you” but it may send you out of nutritional ketosis and open the door to days of hunger and poor control
- Avoid alcohol, juices, sugar drinks, sugar in coffees/teas
- **Restaurants & Fast Foods**
  - Know the menu in advance when possible. Look on-line or review the window menu first.
  - Lead yourself NOT into temptation. Have a say and know why you have chosen a certain place to eat. Keep it a ‘safe house’ for selections.
  - Pre-plan; If unfamiliar then ask about low carb options; ask for the nutrition guide
    - Cheeseburger (minus the bun) and salad (no fries) are usually available options.
  - Ask questions of the server (or chef)
  - Decide what you will have, then stop looking at the menu.
  - Leave off breads, buns, chips, croutons, rice, potatoes etc.
  - Sauces/condiments on the side, especially if they contain sugar (eg ketchup, BBQ teriyaki, jelly/jam/honey, syrups, gravy’s etc. Some include flour and sugar.
  - Soups and stew – often these have flour, potatoes, rice, noodles. Ask ahead.
  - Avoid breaded foods, meatloafs, meatballs (made with bread crumbs). Even Deli meats can be infused with sugars and fillers.
  - Drink WATER
  - Avoid alcohol, juices, sugar drinks, sugar in coffees/teas
  - Keep sipping – mostly water, but OK’s for black coffee (or with real cream – skip the packaged stuff), plain tea.
  - Portion control. Most restaurant meals are just too large for anyone. Make 2-3 meals out of one.
  - See Chapter 11 in the New Atkins for a New You for restaurant meals.

- **Cost/Transportation**

- Pre-plan, make a menu, make a list
- Save money by not buying what you don't need
- Your good health and appearance is worth paying for
- Fresh, frozen, canned – all good options
- Make 2-3 meals out of one restaurant meal
- Boiled Eggs, canned tuna, cheese, nuts, vegetables – good options on a budget, most travel and keep well. Invest in a cooler pack
- Pre-pack meals and snacks when you are on the go – never let yourself get too hungry, you'll be prone to making bad choices if you do.
- Walk or ride a bike with a back pack (and a cooler pack). Plan a bus trip or ask a friend/family for a ride to obtain the items on your list.

- **Alcohol**

- Avoid
- Lowers inhibitions and may lead to bad decisions
- High in carb and/or mixed with drinks high in carbs
- Can use in very limited selection and portions down the road – have hope if you miss this – but may slow down weight loss so wait until you are in maintenance phase!

- **Good Mood**

- Ketone products used in the brain for fuel may lift your mood and discourage depression. You may be smiling with success and positive energy. It's contagious
- Sugar on the other hand (and overeating) can make you tired, lethargic and not the best of company.

- **Bad Breath**

- Ketones on the breath are a GOOD sign but they may also be confused with alcohol breath (beware at traffic stops) or sick breath from diabetes ketoacidosis.
- Stay well hydrated
- Dental hygiene – brush and floss teach. Use mouthwash rinse
- Sugar free gum and candy – limit due to slowing down of lipolysis (fat burn) and weight loss
- **New Clothes / New Looks / New life**
  - That's why it's the New Atkins for a New You!
  - Take advantage of new hobbies, renew old interests. DO stuff with friends or make new ones. Life isn't all about food. Get outdoors.
  - There is more to life than dessert (plus insulin)
- **Bias**
  - Some won't agree with your 'diet' – be an example of how it's working for you. The best diet is the one that works for you long term.
  - Some may be inwardly jealous and 'sabotage' – setting a trap or tempting you. Beware!
  - We are all different – in minds, bodies and needs. While some foods are OK for others, these may NOT be OK for you – like an allergy. "I'm allergic to carbohydrates, if I eat more than a limited few they make me ill"
- **Support:**
  - Team up with a a buddy: friend, spouse, family, ... – in person, via phone, on-line. Join and Atkins or similar low carb on-line group!
  - Cheer yourself on – look at what you have accomplished, what you plan to accomplish, look at the advantages! Celebrate
  - Take advantage of new opportunities: new clothes, new friends, more energy, more activities, more fun!
  - Nothing tastes as good as being \_{eg off insulin/having more energy/look good}\_ feels. You fill in the blank.
- **Resources:**

- A New Atkins for A New You and other Atkins/Low Carb diet texts
- [www.atkins.com/support](http://www.atkins.com/support)
- Monitor. Food journal, carb counts, hunger, ketones, weight, exercise. You are your own strongest critic and best friend.
- MOVE Staff

NOTE: weights can vary within 4 lbs in one day even without clothes and shoes! Be flexible with your own expectations.

- **HELP, I messed up!**

If you did NOT have a successful day, think why / what happened. How could you have handled it better. File it as a difficult or high risk situation. Make your environment 'safe' again (get rid of tempting foods/stock up on the 'good' stuff). Avoid or do better pre-planning next time. Let it go for today. Start again next meal/tomorrow. You still have your goal to achieve! This meal / today was just a minor setback in the view of long term success. If you have too many 'bad' days, revisit your goals and is this the right diet for you? See also relapse control week 7.

- **Wow, It's working, look at me ☺**

CONGRATULATIONS on making changes. It's not easy but will be more comfortable as you go. Share your success with others! They'll notice anyway. You can't hide the smile so don't try – let it shine.

#### MONITORS OF SUCCESS:

- Weight loss
- Ketones, urinary or breath
- Cravings, Hunger
- Mental Energy
- Physical Energy
- Feelings of Self Control

These monitors help you to determine your Atkins Carbohydrate Equilibrium (ACE) or acceptable carb tolerance.





***MOVE  
LOW CARB  
PROGRAM  
Week 6***



## ***MOVE LOW CARB PROGRAM***

### ***Week 6***

#### **THE INFLAMMATORY RESPONSE OF HIGH CARBOHYDRATE DIETS**

**INFLAMMATION:** Normally, inflammation occurs in response to injury and attack by germs. Symptoms show as heat, redness, swelling and pain, and are the body's way of getting more nourishment and more immune activity to an area that needs them. But inflammation isn't always helpful. It also has destructive potential. We see this when the immune system mistakenly attacks normal tissues in such autoimmune diseases as type 1 diabetes, rheumatoid arthritis and lupus. Inflammation is a process in which the immune system becomes off balance, and persists unnecessarily in its efforts to repair the body and repel pathogens. The prolonged process results in damage to healthy tissue as well. Stress, lack of exercise, genetic predisposition and other lifestyle factors can all promote inflammation, but poor diet is perhaps the main contributor...and the ideal place to begin addressing inflammation.

Risk factors for Inflammation: chronic inflammation has shown to be a root cause of many serious diseases, including:

- Autoimmune diseases such as Arthritis (or gouty arthritis), lupus and diabetes
- Alzheimer's
- Age-related disorders including many cancers
- Heart disease
- Osteoarthritis
- Parkinson's disease

**Carbohydrates.** Beware of sugar and high-fructose corn syrup which contain inflammatory substances that aggravate joints and irritate bowel function. Carbohydrate foods influence the inflammatory process by chemical reactions between the sugars and protein which produce pro-inflammatory compounds called AGEs (advanced glycation end products). You can moderate this process by keeping blood sugar low and stable (by limiting or avoiding simple carbohydrates). Studies have shown the consumption of soft drinks sweetened with sugar and/or fructose (high fructose corn syrup) is associated with an increased risk for inflammatory diseases such as arthritis or gouty arthritis, according to Hyon K. Choi, MD, PhD from the Arthritis Research Centre of Canada, Vancouver General Hospital, University of British Columbia in Vancouver, and Gary Curhan, MD, ScD, from the Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts. Dr. Choi indicated the sugars (sucrose and fructose) result in a rapid increase in serum levels of uric acid (through the process of breaking down purine nucleotides which increases purine production). Diet soft drinks are not associated with the risk of inflammation.

Slow Carbs Counter Inflammation. Low-glycemic, slowly digested carbs such as whole grains, legumes, vegetables and other high-fiber foods significantly reduce markers of inflammation linked with chronic disease, according to research from Fred Hutchinson Cancer Research Center in Seattle. Their study compared a diet with high-glycemic-load carbohydrates such as white sugar, fruit in canned syrup and white flour to a diet with low-glycemic load carbohydrates such as whole grains, whole grain breads and cereals. The results of the study showed the low-glycemic load diet reduced C-reactive protein (a biomarker of inflammation) by about 22%. The study also resulted in increased adiponectin (a hormone linked with protection against cancer and metabolic disorders) by about 5%. These findings support the benefits of minimally processed, high-fiber, low-glycemic carbohydrates in disease prevention.

Anti-inflammatory Foods Fight Pain. Research is beginning to discover the power of diet. Studies show that your daily food choices can either reduce or increase levels of inflammation in your body. A 2006 review published in the *Journal of the American College of Cardiology* found that a dietary pattern high in refined starches, sugar, saturated fats and trans fats and low in fruits, vegetables, whole grains and omega-3 fatty acids increased inflammation. The Mediterranean diet patterns (high vegetable, fruit, whole grain, healthy plant fats and fish) are linked with lower inflammation. A low intake of processed foods, refined grains and red meat are also linked with lower inflammation. Jessica Crandall, R.D., C.D.E., Wellness Director at Sodexo Health Care and spokesperson for the Academy of Nutrition and Dietetics says, “Foods that contain high amounts of antioxidants and omega-3 fatty acids, such as berries, beans, broccoli, spinach, kale, sweet potatoes, tomatoes, grapes and fish will help reduce inflammation throughout the body.”

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## EXERCISE ON A LOW CARB DIET

Exercise is good for Everyone! So why NOT at the beginning of a low carb (nutritional ketosis) diet?

- **How Energy Works - Mechanism**

Exercise is using your muscles. Muscles have a store of glycogen packaged in water. **Glycogen** is the storage form of glucose (sugar) in your muscles for immediate energy use. When plenty of carbs are available from diet, then there is plenty of glucose to replace the glycogen stores. Problem is, the body has little glycogen storage capacity, so most excess carbs are stored as fats to be used up at time when ‘living off the fat’ will be needed – poor harvest, bad winter, poor hunt,... (or going on a traditional weight loss diet).

In diabetes (difficulty in distributing glucose into cells) too much glucose stays in the blood (Insulin Resistance and Hyperglycemia) causing the problems common to diabetes. On the other hand your body cannot afford to let your blood sugars get too low either. You are sensitive to signals of low blood sugar and get hungry / crave more carbs when utilizing glucose as the main fuel.

**When few carbs are available, the muscle glycogen gets ‘used up’ in daily activities and the water stored with glycogen is released too. That’s why you may have felt a tiredness and achiness in the first 1-2 weeks of a very low carb diet. What happens now on a continued low carbohydrate diet? Your muscles learn to use ketone bodies (fat) for fuel. While eating in moderation, You ARE now ‘living off the fat’ using the fat for fuel.**

The dietary fat plus body fat and triglycerides form ketones when dietary glucose (sugar, starch, carbs) is low. If you are in a steady state of nutritional ketosis, you are now **‘keto-adapted’**, so now you can be more active and use those muscles again. You will utilize the fat burning pathway for energy. The more active you are, the more energy you will need, thus the more fat will be broken down for fuel. **In regular exercisers the body anticipates energy needs and plans ahead, having the energy pathway readily available.**

Beware the glucose pathway is the default energy path. Overeating (or just eating) the sugars and starches can quickly place you back to the default glucose pathway. The **ACE level (Atkins Carbohydrate Equilibrium)** is the maximum number of net carb grams you can eat in a day to keep you in the nutritional ketosis fat burning pathway. **CLL (Carbohydrate level for losing)** is the maximum net carb grams you can eat daily to continue wt loss. **Both ACE and CLL are net carb levels that keep you in the fat for fuel path.** If

you go over a certain level (everyone is different) you will switch back to glucose pathway.

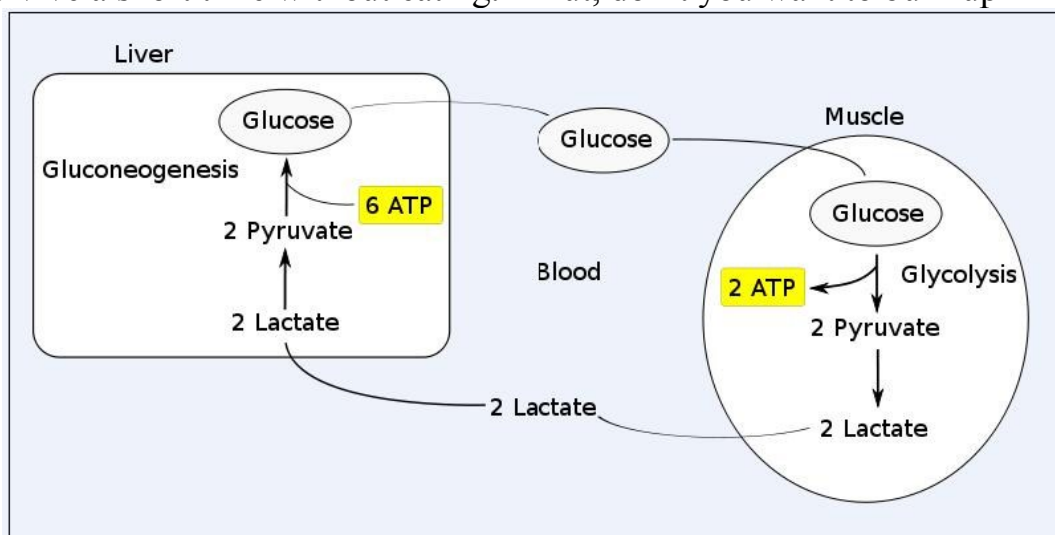
- **Diet with Exercise.**

If starving you will burn up muscle for fuel and your metabolism will slow down. On any weight loss diet, you need to eat! **If you skip meals or fast, the weight loss will slow down as the body protects itself from starvation.**

The focus is protein and fat: moderate protein to maintain lean body and adequate fat to burn. Many protein foods have naturally occurring fats – eg meat, fish, eggs, nuts/seeds, etc. More protein won't make more muscle; **Adequate protein will preserve muscle and along with exercise can BUILD muscle.**

**In excess, protein and fat will still get stored as fat, so eat in moderation.**

Remember a major goal is to use up the current fat stores (belly fat), but not the current muscle stores. Recall that glucose that's not immediately used up as energy stimulates insulin which in turn promotes fat storage – wrong direction! See glucose used as energy in the cycle chart below. IF you eat in moderation, exercise regularly and do NOT have diabetes or metabolic syndrome, then you can eat a traditional 'balanced' diet including 150 grams or more of carbohydrates a day and maintain weight. ATP are molecules of fuel/energy. Glucose recycles itself between the muscle and liver. The liver can make glucose (gluconeogenesis) so the muscle can burn it (glycolysis) – so you don't need to eat so much even on a traditional diet and you can 'fast' while you sleep or survive a short time without eating. But, don't you want to burn up FAT?

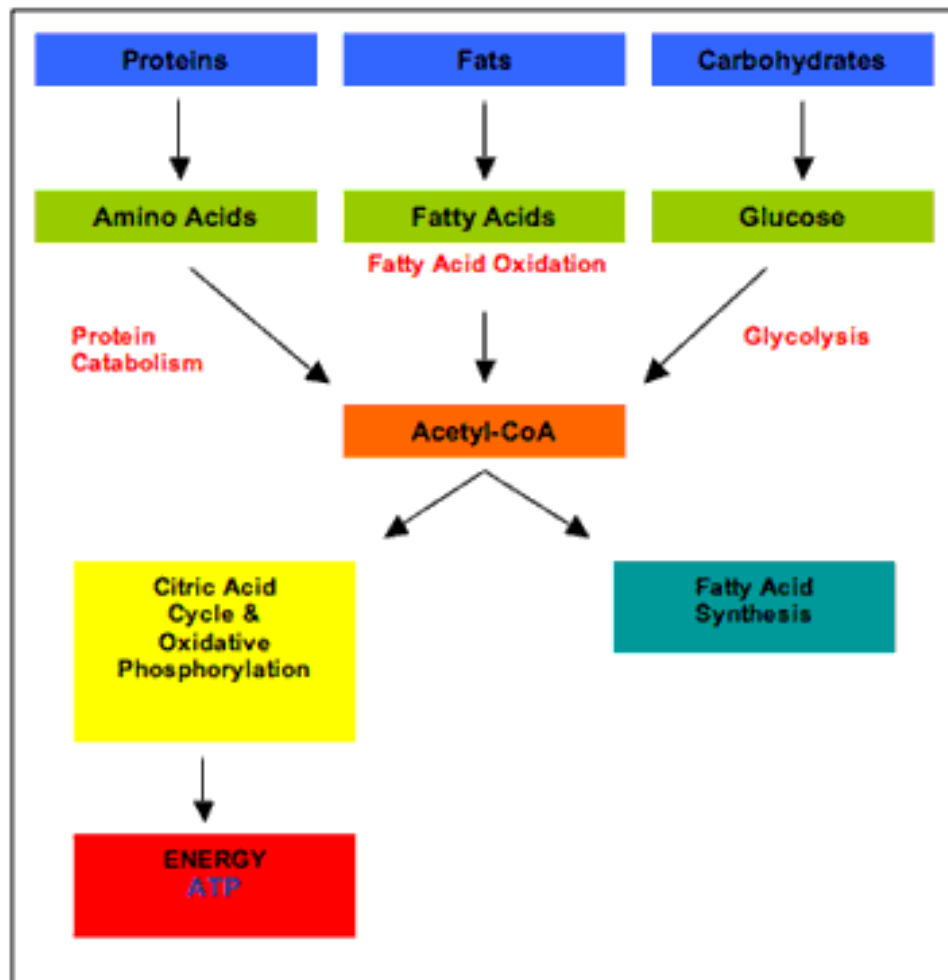


**If however you DO have diabetes, metabolic syndrome, and are unwilling or unable to exercise 30-90 minutes most days, the traditional low fat (high proportion of carbs) diet may NOT work for you. You want to burn up fat, not just sugar.**

Glucose is the major default route for body fuel/energy, but the body CAN use protein and fat instead when not enough glucose is present. No healthy weight loss diet wants you to burn up muscle for fuel. In the chart below note the 3 paths for fuel. If you don't want muscle to be your fuel source and you DO want to use FAT for fuel – then follow the low carbohydrate diet. Energy (biochemical ATP) can be made from protein, fat, or carbohydrates but note the fatty acid synthesis (fat storage) which insulin encourages. **What you DO want is to eliminate most dietary carbs (your liver will make the necessary ones needed), consume moderate protein and moderate fat. Now add in increased energy needs, i.e. EXERCISE and you body essentially hunts for the fuel sources with excess fat in storage as the prime target (assuming you are not overeating).**

Here's the path:

Fat → Fatty Acids → Fatty Acid Oxidation to Acetyl-CoA → Citric Acid Cycle (formerly Krebs's cycle) → ENERGY!!!





In three steps, two acetyl CoA react to make acetoacetic acid.

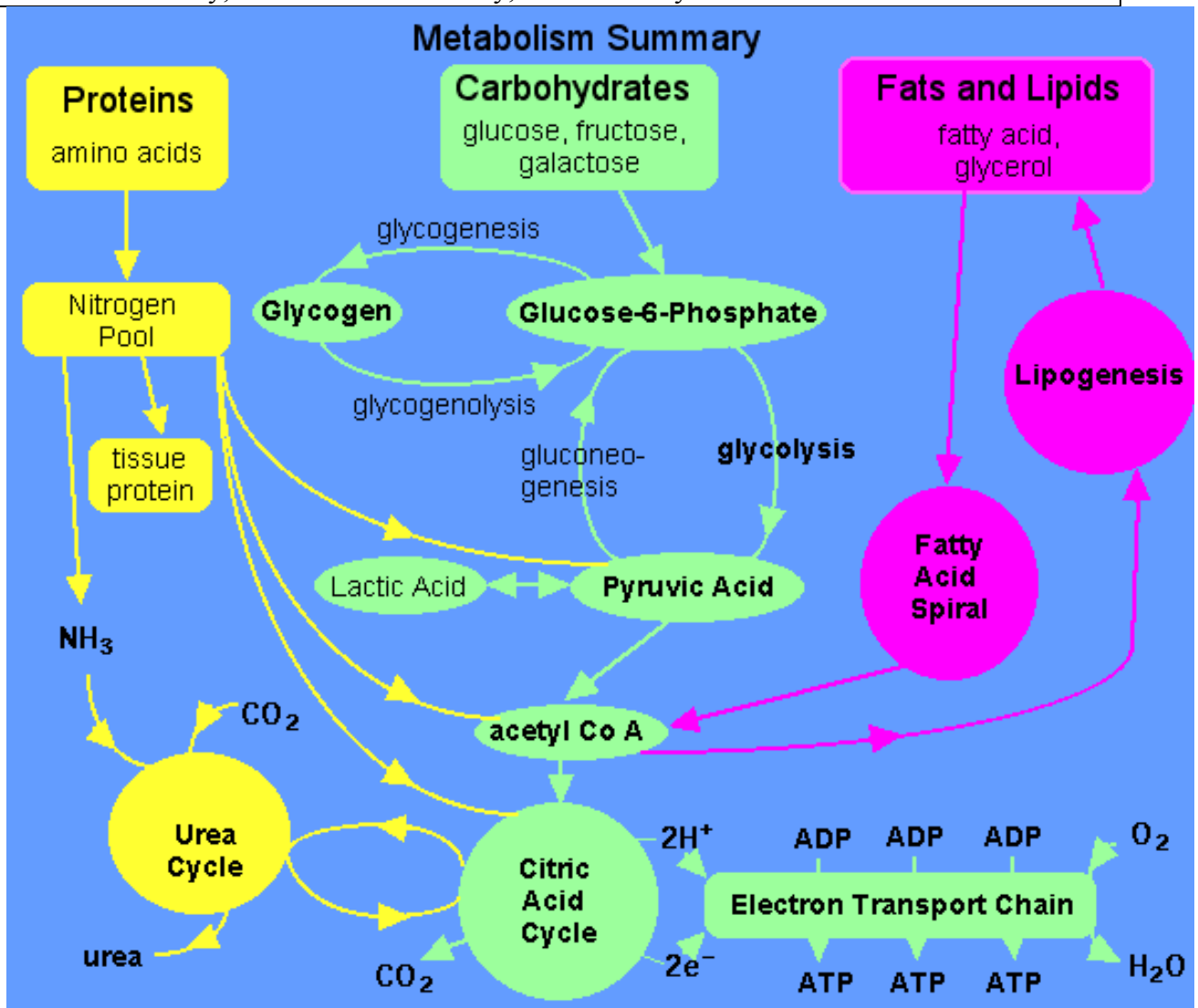
The acetoacetic acid may be changed into either acetone (ketone breath) or 3-hydroxybutanoic acid.

All three compounds are collectively known as **ketone bodies**

The odor of acetone may be detected on the breath of a person with excess ketone bodies in the blood. The overall accumulation of ketone bodies in blood and urine is known as **ketosis**.

Both acetoacetic acid and 3-hydroxybutanoic acid can be used by the heart, kidneys, and brain for metabolism to produce energy. The heart and kidneys actually prefer these to glucose. In contrast, the brain prefers glucose, but will adapt if necessary in starvation or diabetic conditions.

Source: Jim Hardy, Professor of Chemistry, the University of Akron



Your body is a power plant! Make it into a fat burning factory by reducing the carbohydrate as fuel pathway, going into fat burning mode! Top it off with

increased energy needs (exercise) and your body will be looking for fat to burn and doing so along with making energy very efficiently.

Analogy: think of breast milk production. The more anticipated need, the more the body produces. Don't use it and the milk 'dries up'. **The more exercise you do the more ready energy you will produce** efficiently (from FAT or glucose depending upon the diet). Regular exercise seemingly 'sucks out' the fat on a low carb diet.

Without exercise, your metabolism and daily activities require energy but exercise maximizes the effect. Exercise reduces the insulin resistance of diabetes better than diabetes medications.

- **Water and Salt**

Water (H<sub>2</sub>O) is used in nearly every chemical reaction. Salt helps the body store water. When utilizing fat (ketones) for fuel, the body tends to release excess water and even salt. Therefore replacement is extremely important, especially before exercise. DO drink an additional 8 oz cup of bouillon (salt water) within 1 hour prior to moderate/heavy exercise to prevent problems like fatigue, aches, cramps.

- **Benefits of Exercise**

- **Health Promotion**



Overall Health  
Weight Loss  
Improves Sleep  
Less Injury  
Mental Function  
Social

Fountain of Youth  
Weight Maintenance  
Reduces Pain  
More Independence  
Quality of Life  
Productivity

Energizing  
Improves Mood  
Improves Circulation  
Reduced Medications  
Longer Life  
Hobbies

- **Disease Prevention**

Diabetes  
Hypertension  
Cancer

Heart and Vascular  
Cholesterol  
Sexual Dysfunction

Stroke  
Blood Clots  
Osteoporosis

- **How to Begin Exercise**

If you have slowed while starting the new low carb diet, then now is the time to resume your prior level of activity. Then begin to slowly add more pedometer

steps, park further away, take the stairs, start a walking program (or swimming or biking). Begin **S L O W L Y** with what you know you can do.

Then advance *gradually*, little by little.

- *EASY*. As Little As:

**150 minutes per week** of moderate level aerobic activity.

Do at least 10 minutes at a time.

Work on strength at least 2 days a week.

Add 250-500 pedometer steps a day each week.

- *Work up to.* **RECOMMENDATION:**

***AEROBIC / CARDIO / FITNESS***

30-60 minutes of moderate level aerobic activity per day.

5-7 days per week (nearly every day).

***STRENGTH / BALANCE / RESISTANCE***

At least every other day.

Include all major muscle groups: abdominal, chest, back, legs, hips, arms

8-20 repetitions per set. 1-3 sets per work out session.

Successful losers exercise 30-90 minutes most days!

- **Caution!**

Avoid increase in exercise while still on insulin or other blood sugar lowering medication while beginning a low carbohydrate diet! The body naturally avoids low blood sugars but medicine you take or inject will overwhelm the body's regulation and make the blood sugars go too low – DANGEROUS hypoglycemia! This can result in confusion, coma, death.

You do need something for fuel and water to make the energy chemical reactions happen. Therefore your diet **MUST** consist of adequate carbohydrates (on a low fat diet) or adequate fats (on a low carb diet) to burn for fuel and adequate WATER to make the chemical 'burn' reaction possible without overheating. Cutting out both carbs and fats is **VERY** bad and even dangerous. Protein alone is not a good fuel. Starvation can make you very sick (ketoacidosis) and dead.

- **Do something fun!**

It is so much easier to move around once you have lost weight (AND BECOME KETOADAPTED). Take a class; ask a friend to join you, bike for transportation, go to a park, join a bowling league,...

***MOVE  
LOW CARB  
PROGRAM  
Week 7***



## ***MOVE LOW CARB PROGRAM***

### ***Week 7***

#### Review of Metabolic Function

- Low carbohydrate intake is the fastest path for fat burning mode
- Water, water, water
- Salt
- Potassium
- Protein foods
- Fat's role in healthy metabolism
- No trans fats
- The inflammatory response of a high carbohydrate diet

## **PHASE 3**

### **Pre-Maintenance**

- Phase 3 broadens the range of acceptable whole food carbs in the form of other fruits, starchy vegetables, and finally whole grains.
- Not everybody can add back all these foods or eat them on a regular basis.
- In Phase 3, you will attain your goal weight and then make sure that you can stay there for a month.
- When you reach your goal weight, you'll test out the level of carb intake you can handle without regaining pounds or losing the precious metabolic adaptations you have achieved.
- Once your weight has stabilized for a month and your food cravings are under control, you are ready to move forward.
- Here are some tips to help you get started in the transition:
  - Gradually increase your carb intake in 10-gram increments WITHOUT gaining weight or prompting the return of old symptoms (loss of energy, tired all the time, weight gain, sluggish, bloated, food cravings, hunger, high blood sugars, etc.).
  - Reintroduce foods in a certain order.
  - Address challenges such as plateaus and carb creeping.
  - Continue to increase activity levels – integrate more physical fitness into your weight control program.
  - Customize Phase 3 to suit your needs – you can always back off a bit if a new food causes a problem with weight gain or old symptoms.
- Getting started:
  - Increase your daily carb intake by 10 grams
    - 30-50 grams + 10 grams = 40-60 grams net carbs/day
  - Test your carbohydrate tolerance: include starchy vegetables, whole grains and fruits other than berries.
  - Continue 12-15 grams of your total daily net carb intake in the form of foundation vegetables; they will continue to be the platform upon which you build as you add back new carbohydrate foods.
  - Continue the recommended proteins and sufficient natural fats to feel satisfied at the end of each meal.
  - Continue to drink plenty of water; if your net carb intake is 50 grams or less, be sure to include enough salt into daily meals.
  - Once you exceed 50 grams net carbs/day – you do NOT need to consume salty broth, or extra salt or soy sauce on your food.

- Continue to take your supplements – 1 multivitamin/d and 1000 mg fish oil 3 x day
- Focus on “healthy” carbs; limit or avoid “unhealthy” carbs to continue your road to good health.
- If you gain back some weight, simply drop back 10 grams of net carbs/day. Stay there for several weeks and if slight weight loss resumes, try increasing your carb intake by 5 grams to see if you get the same reaction you did with a 10-gram increase.

➤ Phase 3 Expectations:

- As you increase your carb intakes, you may lose an average of as little as a half pound per week, which is perfectly natural.
- You may be tempted to revert back to OWL or even Induction; DON'T DO IT. Pre-maintenance is where you learn how to eat in the real world.
- The last few pounds and inches are often the most stubborn.
- Be realistic – if you get down to the last 10-20 pounds – see if this level can work for your personal preference and health.
- Beware – if you are looking forward to revisiting all your old food friends, prepare for problems; it is unrealistic to return to all of your old eating habits and expect to maintain your weight loss, improved blood pressure, improved blood sugars and improved lipids; having a treat day on occasion....and I do mean occasion....can work very effectively; if those treat days get too close together – that's when weight gain and health problems will re-surface.

REFER to “The New Atkins For A New You,” Chapter 9, page 147-164. Review the list of foods designed for Phase 3.



## **SIDE EFFECTS OF SIMPLE CARBOHYDRATES**

- LOSS OF ENERGY
- WEIGHT GAIN
- TIRED ALL THE TIME
- SLUGGISH
- BLOATED – FLUID RETENTION
- FOOD CRAVINGS
- HUNGER
- HIGH BLOOD SUGARS
- WEAKNESS
- SHORTNESS OF BREATH
- GASTRIC DISTURBANCES (cramping, diarrhea or constipation)

If these symptoms come back – evaluate what you have eaten that may have caused it – then eliminate that item from your carbohydrate choices.



## **RELAPSE PREVENTION ON A LOW CARB DIET**

Think lifelong way of eating/living.

“In order to preserve the therapeutic benefits from carbohydrate restriction, you have to be able to live a low carbohydrate lifestyle. In other words a low carbohydrate diet does not cure insulin resistance or diabetes, but it very effectively does put it in remission. Therefore it is critical to stay at or below your unique level of carbohydrate tolerance to continue to reap these benefits long term.” Drs Volek and Phinney, The Art and Science of Low Carbohydrate Living.

- **MOTIVATION**

What didn't you like about your prior weight and medical conditions?

What problems/issues were you having before that have now resolved?

These are what you do NOT want to go back to. DO be clear about your own goals. Be sure they are solid and reasonable goals. What IS motivating you?

- **POSITIVE REMINDERS**

What positive changes have you noticed in your weight, your appearance, clothing size, energy, cravings, hunger, function...

- **NOTHING TASTES AS GOOD AS BEING {...OFF INSULIN...} FEELS.**

Do the positive changes outweigh the immediate gratification of eating something sweet or starchy? Do you *want* to go back to cravings, hunger, insulin, ...? Do you want to go back through the carb withdrawal and 'Atkins flu'? Is a moment on the lips or tongue (the taste) worth the risk of more cravings and weight regain?

- **OVERCONFIDENCE**

Did you push the carb limit (ACE) too fast? Did you think you could test the waters and go overboard ('cheat') just one time and think you could stay in control? Did alcohol lower your dietary inhibitions? Did stress or poor sleep or social pressures test your limits?

- **SLIPPERY SLOPE VS HEALTHY SUBSTITUTIONS**

Carb Zero bread sandwich vs lettuce wrap

Diet sweetened soft drinks vs water

Low carb Atkins, South Beach, or protein bars vs ?

Is the healthy substitution a nice treat or is it a temporary alternative to the ‘real’ bread, sugar drinks, candy bars – a slippery slope to relapse. Be aware of your own motives. Develop true healthy long term food habits. Face it that sandwiches and sweetened drinks are something you will need to ‘give up’ so plan and prepare to do so now. The healthy substitution is meant for the occasional treat, not the daily norm. Prepare to mourn what you give up, but do plan to recover quickly by something new you look forward to.

- **MAKE LOW CARB CHOICES A HABIT**

It does get easier after time, once you have regular favorite ‘safe’ meals and don’t have to go back to the counting books except when adding new foods. Surround yourself with foods ‘on program’. Pre-plan. Brown bag. People you live with will be inspired by your positive results and quit doubting if this diet is unsafe. In time, it just feels right. It becomes the automatic choice. It becomes a habit.

- **MAKE THE BEST CHOICE**

Pre-plan to control your environment, but if you find yourself in a difficult environment – make the best of it knowing what you know. Make the best choices among the choices available. Avoid starvation, skipping meals, etc. You need something for energy (you can usually get by 6-8 hours if you must). Stay hydrated – drink water. Be creative – take the lunchmeat or burger or egg out of the bread or bun or McMuffin. Get back on the low carb program ASAP! Up the exercise until you can be back to lower carbohydrate levels.

- **FUN ☺ OR MISERABLE ☹**

Are you having fun with your new weight loss, your new looks and energy OR are you miserable and mourning what you have given up – the breads, rice, pasta, alcohol, drinks, sugars, desserts,...

FUN – celebrate with new hobbies, new clothes, and new activities. Revel in the compliments and take advantage of the new look and energy. Do things you have been unable to do in the past – travel, go sightseeing, go shopping,... You have given up some pleasure and spontaneity of food. You are working for your health so find some pleasure/fun to balance it out. Focus on Can Do, Can Have.

MISERABLE – maybe you are trying to do too much – set goals too high. Are you eating enough including fats and vegetables? You cannot be successful with combining low fat and low carbohydrate – you need to eat *something* for fuel. Do you have hobbies other than food or is food still your only pleasure – so when food is taken away you are miserable? Are you focused on what you *cannot* have? Try the decision chart below – analyze the pros and cons.

PERSONAL DECISION TABLE

PRIOR DIET/WAY OF LIFE			LOW CARB DIET/WAY OF LIFE	
PROS	CONS ☹️		PROS 😊	CONS
Eg Easier, fewer 'rules'. Can eat sugar, potatoes, rice, pasta, bread and alcohol (but they didn't help me lose weight nor my diabetes)	Eg Reached plateau /lack of weight loss. +hunger, +cravings Too many medications. + insulin inconvenience	N O W	Eg, off insulin, not hungry, fewer cravings, weight loss when other quit working, exercise not required. CAN eat cheese, mayo, meat, creamy dressings	Eg loss of convenience, carb counting, pre-planning required.
		IN 3 M O N T H S		

### • REASONS WHY WE EAT

NORMAL: hunger, nutrition, health, energy,...

ABNORMAL: boredom, stress, convenience, routine/habit/conditioning, pain, poor sleep, social, celebration, medications causing weight gain...

ABNORMAL / PSYCHOLOGIC: depression, anxiety, obsessive/compulsive, bulimia, binge eating, night eating syndrome, ...

Even with less hunger on a low carb diet the unresolved abnormal eating patterns can sabotage your success ☹️. Do beware of medications that can increase your appetite and have an effect on your weight.

### • REASONABLE EXPECTATIONS

Be reasonable with yourself and with others. You will NOT lose 3 lbs every week. You WILL benefit from exercise, just not while in induction. Others have seen you diet before and fail so is anyone taking bets on you this time? There is no magic way to lose a large amount of weight and keep it off. You do

have to work at it and have reasonable expectations. Also just because you are on board doesn't mean others will be. You have to ready to make the changes necessary for weight loss. Doing or going back to the same ole same ole usually results in weight *gain* and that's what you want to avoid long term. Humans are adaptable. Adapt in the direction of your choosing.

- **SELF ACCOUNTABILITY**

You are responsible for your own body and actions. You do have significant control in your own health. Being accountable in groups, with spouse/friends, and MOVE team is great and helpful. It really comes down to doing the best you can do 24/7 for your own health and success. Complete the above decision table to remind yourself and reinforce your motivation. Revisit the chart in 3 months. You only have one body for a lifetime; Take care of it.

- **RELAPSE CONTROL**

If you stray, get back on the low carb program ASAP! You know how; you did it successfully before. Learn from your relapse – what went wrong? How could you have prevented the relapse? You are human and make mistakes. Ask for help/support. Review the decision chart above to remind yourself why you should get back on the low carb program.

Review your Low Carb resources.

- A New Atkins for A New You and other Atkins/Low Carb diet texts
- [www.atkins.com/support](http://www.atkins.com/support)
- Monitor. Food journal, carb counts, hunger, ketones, weight, exercise. You are your own strongest critic and best friend.
- MOVE Staff and MOVE Low Carb Manual.

- **ON A DIET VS LIFESTYLE/LIFELONG**

Are you champing at the bit to get back to your old way of eating?

If you're feeling deprived, and looking forward to revisiting all your old food friends as soon as possible, you're cruising for a bruising. Unless you are blessed with superhuman powers of self-control or the metabolism of a superhero- in which case we doubt you'd be reading this book – it's simply unrealistic to think you can drop weight and/or get your blood sugar, blood pressure, and lipids under control and then return to your old way of eating without repercussion. In fact, no matter how you lose weight, abandoning your new way of eating once you reach your goal almost inevitably leads to weight regain. If you return to a high-carb diet- usually laden with heavily process foods – you'll also likely experience the attendant health problems already mentioned .... IF YOU PLAN TO CELEBRATE REACHING YOUR GOAL WITH PASTA, FRENCH FRIES, AND JELLY DOUGHNUTS, WHY ARE YOU WASTING YOUR TIME SLIMMING DOWN ON ATKINS?

Westman, Phinney, Volek, The New Atkins for a New You. P148-149.

- **5 P's**

Patience, persistence, planning, positive attitude, perspiration (exercise)

- **BEST DIET**

**The best diet for you is the one you can stick with – life long!**  
**ALCOHOL USE**

Is it okay to drink while on Atkins Diet?

Per Atkins website resource: [www.atkins.com/support](http://www.atkins.com/support)

Can you consume alcohol while doing the Atkins Diet? No and yes. What alcohol can you consume on the Atkins Diet? Obviously low carb ones.

**No** alcohol consumption if you are still doing the induction phase. You need these two weeks to deal with your food addictions. The body will burn the alcohol for fuel before it burns the carbs and fat. So it would slow down the fat burning process. Drinking lowers your inhibitions and can lead to lapses in judgement. Plus there is some research indicating that even the so-called zero carb drinks such as whiskey can result in insulin spikes.

Drink lots of water instead!

**Yes** but with moderation when you are moving to the later phases, OWL and so on but not while in induction. When you move to OWL, pick drinks with zero carbs like vodka, gin, whiskey or Bacardi rather than going for beer.

If you must drink alcohol, straight liquor such as scotch, rye, vodka, and gin would be the best choices as long as the mixer contains no sugar. If you have added alcohol to your diet and suddenly stop losing, give it up.

Just be careful though with the alcohol, as munching and crunching always seem to go with it. So you need to plan ahead. Bring along your own low carb snacks.

And I quote from Robert C. Atkins,

Here's the problem with all alcoholic beverages, and the reason I recommend refraining from alcohol consumption on the diet. Alcohol, whenever taken in, is the first fuel to burn. While that's going on, your body will not burn fat. This does not stop the weight loss, it simply postpones it, since the alcohol does not store as glycogen, and you immediately go back into ketosis/lipolysis after the alcohol is used up.

If you must drink alcohol, wine is an acceptable addition to levels beyond the Induction diet. If wine does not suit your taste, straight liquor such as scotch, rye, vodka, and gin would be appropriate, as long as the mixer is sugarless; this means no juice, tonic water; or non-diet soda. Seltzer and diet soda are appropriate.

The downside of alcohol consumption while on Atkins Diet? If you have indulged in a glass or two of wine on occasion and weight loss comes to a dead stop and I mean for days, you will probably get discouraged because of the slow progress of weight loss.



Well, until the alcohol is burned off your body will not burn fat. Fat burning will be postponed until all the alcohol has been used up. How long that will take depends on how much you had. A glass or two of wine wouldn't normally stop weight loss for days. It has 7 calories per gram. It may just not agree with you.

Some people have issue with alcohol slowing their weight loss and some don't (lucky people who usually go for moderate intake). Honestly you're just going to have to try it and see what happens. No one can tell you what will happen to you. Even if you have a setback, at least you'll know, right? You will only be able to make the right decision after knowing what works for your body.

We don't lose weight everyday and some not every week, and don't forget alcohol consumption impairs your judgement. In this case of doing Atkins Diet and including alcohol consumption in it, maybe a tape measure is a better indication of your progress





***MOVE  
LOW CARB  
PROGRAM  
Week 8***



## ***MOVE LOW CARB PROGRAM***

### ***Week 8***

General guidelines for NET CARBOHYDRATE REQUIREMENTS :

Men	50-100 grams net carbs/day
Women	50-75 grams net carbs/day

Re-introduction of certain types of carbohydrates – which carbs are best carbs.

- The majority of your carbohydrates should be in the form of less-refined, less-processed foods with a low glycemic index.
- Reduce your consumption of foods made with white flour and sugar, especially bread and most packaged snack foods (including chips and pretzels).
- Eat more whole grains such as brown rice and bulgur wheat, in which the grain is intact or in a few large pieces. These are preferable to whole wheat flour products, which digest more quickly than whole grains.
- Eat more beans, winter squashes, and sweet potatoes.
- Cook pasta al dente and eat it in moderation.
- Avoid products made with high fructose corn syrup

Counting carbs to maintain goal weight by testing level of carbs without regaining

Keeping food cravings under control

Control carbs to burn fat

Sample maintenance diet meal plans and recipes – refer to your book – “The New Atkins for a New You,” Chapter 12, pages 201-273.

*“There are NO redeeming qualities of sugar”*

## **PHASE 4 KEEPING IT OFF LIFETIME MAINTENANCE**

- You are out of the weight loss phases and into the maintenance phase – also referred to as lifetime maintenance.
- You have found your carbohydrate tolerance to keep off the weight.
- Protect your weight loss.
- Making these changes permanent is as challenging as it was to achieve them.
- You will continue to test out the level of carb intake you can handle without regaining pounds or losing the precious metabolic adaptations you have achieved.
- Here are some tips to help with lifetime maintenance:
  - You want to arrive at a place where you are mindful of your weight but not obsessed with it.
  - Weigh yourself once a week. The scale may have a four-pound weight range in fluctuations – don't be alarmed – it's natural.
  - Prevent the return of old symptoms (loss of energy, tired all the time, weight gain, sluggish, bloated, food cravings, hunger, high blood sugars, etc.).
  - Address challenges such as plateaus and carb creeping.
  - Continue to increase activity levels – integrate more physical fitness into your weight control program.
  - Customize Phase 4 to suit your needs – you can always back off a bit if a new food causes a problem with weight gain or old symptoms.
  - Continue the amount of protein you've been eating all along – as it is close to optimal portions; more is not better.
  - Fat remains your friend; fats are satisfying and as long as carbohydrate quality is controlled, fats will not cause problems with weight gain or cholesterol problems.
  - There is no “one-size-fits-all” maintenance program.
  - Focus on “what do I need to do to keep off the weight I've lost and maintain my health long term?”

➤ Getting started in the last phase:

- Continue to eat healthy “whole foods.”
- Continue 4-6 oz. protein foods at each meal; 8 oz. if you are 6 foot 2 inches or taller.
- Eat healthy fats – enough to keep you satisfied.
- Always include 12-15 grams of net carbs from foundation vegetables.
- Once you exceed 50 grams net carbs per day – you do NOT need to consume salty broth or additional salt or soy sauce on your food. You may continue to consume them, however, if you find them satisfying and if they help curb cravings.
- Continue to eat any food you have re-introduced as long as it does not cause weight gain or a return of old symptoms.
- Continue your multi-vitamin/mineral and omega-3 supplements.

➤ Phase 4 Expectations:

- Say good-bye to old habits.
- If you have temptations or cravings...your body may just be saying that “you’re not feeding me enough.” Have you eaten enough of the right foods prior to your temptation?
- Find a good habit to replace old habits.
  - Examples:
    - A low-carb bar
    - Salted nuts and bottle of water
    - Apple chopped in 1 inch cubes mixed with plain yogurt
    - A low-carb protein shake instead of alcohol or juice; your body burns alcohol before carbs and fat; alcohol also may lower inhibitions – making temptations easier; if you must drink – stick to a heart healthy 4 oz. portion of dry red wine.
    - Refer to page 180 in “The New Atkins for a New You” book for more ideas

REFER to “The New Atkins For A New You,” Chapter 10, pages 168-189. Review the list of foods designed for Phase 4 in the meal plan section of the book.

## LOW-CARB MENU PLANNING

### PHASE 4: MAINTENANCE

What does maintenance menu look like?  
You can plan your daily menu by using the following guidelines

#### Breakfast

Meat or other protein source (usually eggs)

Fat source

*This may already be in your protein, for example, bacon & eggs have fat in them;  
but if your protein source is “lean”,  
add some fat in the form of butter, cream (in coffee), or cheese.  
healthy-carb vegetable (if desired)  
This can be in an omelet or breakfast quiche.*

#### Lunch

Meat or other protein source

Fat source -- *If your protein is “lean”—add some fat with butter, salad dressing,  
cheese, cream, avocado, etc.*

1 to 1 ½ cups of salad greens or cooked greens

½ to 1 cup of vegetables



#### Snack

healthy-carb snack that has protein and/or fat

#### Dinner

Meat or other protein source

Fat source -- *If your protein is “lean”—add some fat with butter, salad dressing, cheese,  
cream, avocado, etc.*

healthy carb starch selection

*could be ½ cup brown rice or ½ baked potato or ½ baked sweet potato*

1 to 1 ½ cups of salad greens or cooked greens

½ to 1 cup of healthy carb vegetables

#### Beverages

Water, plain (lemon or lime may be added for flavor) – 90-120 oz/day

Coffee, black or with cream – 1-2 cups/day

Hot Tea, plain or with lemon or cream – 1-2 cups/day

Broth (chicken or beef or vegetable) – 1-3 cups/day

## A SAMPLE DAY MAY LOOK LIKE THIS

### PHASE 4: MAINTENANCE

#### Breakfast

2 egg omelet  
1/4 cup mushrooms  
1/2 cup shredded cheddar cheese



#### Lunch

Grilled chicken w/2 Tbsp. peanut sauce  
4 cups mixed salad greens and other vegetables  
2 Tbsp. creamy Italian or Bleu Cheese salad dressing



#### Snack

1/2 cup plain yogurt with  
1/2 medium apple, chopped

#### Dinner

Flank steak or Salmon Steak  
1/2 cup corn w/butter  
2 cups salad greens with other vegetables  
6 radishes  
2 Tbsp. salad dressing



#### Beverages

Water, plain (lemon or lime may be added for flavor) – 90-120 oz/day  
Coffee, black or with cream – 1-2 cups/day  
Hot Tea, plain or with lemon or cream – 1-2 cups/day  
Broth (chicken or beef or vegetable) – 1-3 cups/day



## TRAVEL DAYS – RESTAURANT EATING A SAMPLE DAY MAY LOOK LIKE THIS

### Breakfast

Bacon or sausage  
Eggs or cheese & vegetable omelet



### Lunch

4-6 oz. Ground beef patti (no bun)  
Large Chef Salad  
Bleu cheese or Ranch salad dressing



### Snack

Pepperoni slices or a cheese stick

### Dinner

Cup of chicken noodle soup or vegetable beef soup – discard the noodles  
Large side salad with dressing, no croutons  
4-6 oz. protein serving (steak, poultry, fish)  
Substitute 2 vegetable servings instead of rice/potato/bread



### Beverages

Water, plain (lemon or lime may be added for flavor) – 90-120 oz/day  
Coffee, black or with cream – 1-2 cups/day  
Hot Tea, plain or with lemon or cream – 1-2 cups/day  
Broth (chicken or beef or vegetable) – 1-3 cups/day

## REVISIT MEDICATIONS, LABS, FOLLOW UP ON A LOW CARB DIET

### WEEK 7-8 Plans

- Labs ordered. Have these drawn fasting. Results may take 2 weeks. Follow up with MOVE Dr Ferguson appointment or your primary care.
- Schedule individual follow up appointment with MOVE Physician
  - Individual medication changes
  - Review lab results
  - Address issues/problems related with obesity and weight loss
- Schedule individual follow up appointment with MOVE RN
  - Body composition/measurements – no food/drink within 3 hrs prior
- Plan to re-integrate to MOVE Maintenance
  - Consider MOVE Exercise or other MOVE programs as well
- Update Medication list to current medications and doses.

### MEDICATIONS

#### Diabetes

- Insulin/Glyburide/Exenatide (Byetta). You should be OFF these medications. Add back only if unable to control blood glucose with low carb diet and exercise
- Acarbose (Precose) works on the dietary carbs/sugars. When you are eating low carbohydrate, then there is no need to continue this medication.
- Metformin can be lowered or discontinued if your blood sugars are less than 100 on a regular basis.

#### Hypertension (high blood pressure)

- Diuretics (water pills). You should already be off these unless taken for purpose other than hypertension. Examples: hctz (hydrochlorothiazide), furosemide (Lasix), spironolactone (Aldactone)
- Atenolol and Metoprolol
  - Now may be the time to:
    - Consider reducing beta blocker blood pressure medications such as atenolol or metoprolol. Do NOT stop these medications altogether unless already taking the lowest dose. Do NOT stop carvedilol as it may be used for heart failure. Do NOT stop or

reduce beta blockers without doctors orders if these are used for heart rhythm control, not just blood pressure

- Lisinopril (ACE inhibitors – medications ending in -pril)
  - This medication has multiple benefits and is the last blood pressure medication to be reduced or removed. Unless you are experiencing low blood pressure with lightheaded/dizziness then this category of medications should be continued.
- Losartan (Cozaar) or Valsartan (Diovan) - ARB's (angiotensin receptor blockers)
  - These medications have multiple benefits and are the last blood pressure medications to be reduced or removed. Unless you are experiencing low blood pressure with lightheaded/dizziness then this category of medications should be continued.
- Other blood pressure medications
  - See Dr Ferguson or your primary care at an individual appointment to assess.
  - Request home blood pressure cuff if you don't already have one and learn how to use it

### Gout

- Allopurinol (anti-gout)
  - If you are losing less than 2 lbs/week, and have stopped diuretics (water pill) then review the uric acid labs. If uric acid labs are normal or only very minimally elevated AND you have stopped diuretics AND you are losing less than 2 lbs/week you may stop allopurinol. Your risk of gout is now sufficiently low.

### Gall Bladder

- Ursodeoxycholic acid (Actigal) anti gall stone formation medication
  - If you are losing less than 2 lbs/week, AND liver/bilirubin labs are normal or only very minimally elevated then you may stop taking ursodeoxycholic acid. Your risk of forming new gall stones is now sufficiently low.

### GERD (acid reflux)

- Medications such as omeprazole or ranitidine can be stopped on a trial basis. If acid reflux symptoms remain problematic, resume the medication.

### Supplements

- Multivitamin – continue
- Fish Oil – continue
  - Typically 1000 mg (one capsule) twice daily
- Anti-Constipation
  - Stool softeners daily if needed
  - Milk of magnesia as needed

### **DIET**

You should have already advanced from induction to on-going weight loss, Phase 2. You may stay in this phase until at or near weight loss goal. You are expected to continue weight loss at ½ -2 lbs/week until pre-maintenance or maintenance phases 3-4. If this is not happening, if you have difficulty controlling carbohydrate limits, reading labels, understanding the low carbohydrate diet, then do schedule an individual appointment with MOVE Dietitian. Do bring food journals with attempts at dietary carb counts. Also refer to your resource text: The New Atkins for a New You and on-line resource [www.atkins.com](http://www.atkins.com).

### **MEASURES OF SUCCESS LONG TERM**

- Weight
- Blood sugar / diabetes control
- Medications and doses for weight related conditions
- Energy
- Ability to live the low carb life long term
- Goals met?

Reminder: update medication doses today on med list and again after completion of labs at individual medical appointment with MOVE Physician. Reminder: review your Decision Box now and in 3 months. “nothing tastes as good as being \_\_\_\_ feels”. Taste of sweets is only a moments pleasure. Live life fully and you won’t miss the sweets (too much). Life IS short IF you eat dessert first. Enjoy living.

IF you should have any ER visits or Hospitalizations within the next 6 months please DO inform MOVE staff. We want to know of and track any complications you may have from obesity, diet, medications, exercise, or new medical problems.

***THANK YOU!!!*** For your participation and success.

***MOVE  
LOW CARB  
Recipes***



## ***Low Carbohydrate Diet Cooking Ideas to Get You Started***

*A low-carb diet frequently means changing not only your eating habits, but your shopping and cooking habits as well. However, making your own healthy, delicious, low-carb food does not have to be difficult or time-consuming. We can provide the recipes for suggestions with an asterisk (\*).*

### Breakfast Foods

Eggs (scrambled, fried, or boiled) with pre-cooked bacon or sausage

*\*Omelet* (easier than you think)

*\*Custard breakfast squares* (make ahead, enjoy all week)

*\*Egg muffins* (make ahead, enjoy all week—these freeze well too)

*\*Quiche* (it's not just for dinner)

*\*Pancakes Low-Carb style* (a weekend treat)

### Lunch/Dinner ideas

*Enjoy these entrees with a salad and/or a vegetable from the allowed foods list. Remember, any time you buy packed or pre-cooked food, check the carb count.*

Hot wings (take-out or deli) with blue cheese dressing and celery

Frozen all-beef burger—grilled indoors or outdoors—with blue cheese or ranch dressing

Chicken Caesar salad: take bagged salad greens, pre-cooked grilled chicken, and low-carb Caesar dressing and you've got dinner

Roast chicken breast from the grocery store (check the label for one with no added carbs)

Use the leftovers for the following dishes (recipes provided):

*\*Chicken cheese steak*

*\*Creamed chicken over fauxtatoes*

*\*Chicken salad*

Steak stir-fry: Get pre-cooked grilled beef in a bag and a bag of low-carb stir-fry veggies. Heat up a pan with a few tablespoons of oil, stir-fry your veggies (throw in some garlic and ginger if you want), add the beef, and a tablespoon of low-carb soy sauce. Sprinkle on some red pepper flakes for spicy! That's it!



Smoked sausage or Polish sausage: Cook sausage in skillet along with onions, peppers, cabbage or sauerkraut until all are done and cooked through. Almost instant one-dish meal!

Antipasto salad: Chop some summer sausage (or pepperoni) and mozzarella cheese into bite-size chunks. Add some olives, mushrooms, red peppers if you want. Toss with some low-carb Italian dressing and allow to marinate overnight.

#### Cook Ahead

*You can make these recipes over the weekend or on a slow night. They all freeze well and taste even better the next day. If you have a crock-pot, it's even easier!*

*\*Beef stew*

*\*North Carolina Pork BBQ*

*\*Chili*

#### Desserts/Treats

Sugar-free pudding made with cream

(Note: This will make 8 very rich servings, instead of the four listed on the box, giving you 4g of carbs per serving.)

Sugar-free jello

*\*No-Bake Cheesecake*

*\*Fluffy Cream Dessert (fruit- or chocolate-flavored)*

#### Snacks

Deviled eggs

Pepperoni slices with a dab of cream cheese on top (sounds weird, but it's tasty!)

Beef sticks (found these at Target; check carb count)

Cheese sticks or string cheese (as your carb count/diet prescription allows)

Upside down pizza bites: Spread pepperoni slices on foil-lined baking sheet; broil until they begin to look a little crispy. Sprinkle with shredded mozzarella cheese and slide back under the broiler for a bit until cheese begins to melt and brown.

*\*Deviled ham spread*

*\*Shrimp dip*

*\*Cheesy chips*

*\*Tuna salad, chicken salad, or egg salad in lettuce wraps*

*\*Cinnamon crispies*

## ***RECIPES***

### ***Tuna or Chicken or Egg Salad***

*This is a very versatile recipe and a great way to have a little change of pace from lunchmeat. Adjust the quantities to suit your taste and carb level.*

*Wrap any of these fillings in your favorite lettuce leaves; or just pile on a plate and eat with a fork.*

#### Ingredients:

1 can of tuna

OR

1 large chicken breast cooked (or 2 cups leftover cooked chicken)

OR

4 hard-boiled eggs

¼ to 1/3 cup mayonnaise

¼ cup chopped celery

1 dill pickle chopped small (or 2 Tablespoons of sugar-free pickle relish—see note)

Salt and pepper to taste

#### Directions:

Mix all of the ingredients and adjust them to your liking.

You may try “fixing up” your salad by adding the following:

a teaspoon of mustard to your egg salad

½ teaspoon of curry powder to any of these

A dash or two of hot sauce to any of these

Some chopped nuts to your chicken salad

A tablespoon of sour cream to replace some of the mayonnaise

Note: Mt. Olive brand makes sugar-free “sweet” relish, if that’s the kind you prefer.

## *RECIPES*

### ***Basic Quiche***

*Add low-carb meat and cheese as you see fit (bacon and “unglazed” ham come to mind). You can add some low-carb veggies later in the program (mushrooms, onions, spinach, etc).*

#### Ingredients:

Butter for pan  
6 large eggs  
1 cup heavy cream  
Salt and pepper to taste  
1 cup grated cheese—Swiss, Gruyere, Cheddar, etc.

#### Directions:

Preheat oven to 350 degrees. Butter a quiche or pie pan (8-9 inch size).

Beat eggs in a bowl with cream and salt and pepper. Add cheese, mix well, and pour into prepared pan. Bake for 40 minutes or until golden on top and set. Serve hot or at room temperature. Makes 6 servings.

## *RECIPES*

### ***Beef Stew Crockpot Style***

*Use low-carb vegetables for this tasty slow-cooked beef stew. The condensed beef broth keeps it flavorful, and the wine adds a little zing. If you don't have the wine or you are just getting started with the diet, more beef broth or water (or 1/4 cup of coffee!) will work fine.*

#### Ingredients:

1 1/2 to 2 pounds stewing beef, cut in 1/2 to 1-inch cubes  
2-3 cups of the following veggies:  
turnips, cubed  
chopped onions  
sliced celery  
sliced mushrooms  
1 can (10 1/2 ounces) condensed beef broth  
1/4 cup red wine  
1/2 teaspoon salt  
1/4 teaspoon pepper  
1 teaspoon thyme  
1 bay leaf  
2 cloves of garlic minced  
1/4 - 1/2 cup of heavy cream or sour cream

#### Directions:

In slow cooker, combine the first 11 ingredients (everything except bacon and cream). Fry bacon until crispy, chop, and add to crockpot. Cover and cook on LOW for 9 to 12 hours, or on HIGH for 5 to 6 hours. At the end of the cooking time, you can eat as is (the easiest) or make a gravy. Adjust seasonings to taste before serving.

To make a gravy, ladle or pour (remove meat and veggies from the crockpot first) the cooking liquid into a saucepan. Boil the liquid on medium-high heat until reduced slightly. Turn down heat and add heavy cream or sour cream to thicken. Add gravy back to crockpot and keep warm until ready to serve.

If you don't have a crockpot, this could be done in a large, covered roasting pan in the oven (at 300 degrees for 3-4 hours), or in a large, covered, heavy-bottomed kettle on the stove (medium-low heat for 3-4 hours). However, you will have to watch and stir and otherwise monitor the cooking process.

This freezes well. After it cools, just pack it in serving size containers or zip-top bags and freeze. Defrost in microwave or on the stove for a quick meal.

## *RECIPES*

### ***Low-Carb Breading***

Ingredients:

- 1/4 cup almond meal ("ground almonds" - same thing)
- 1/4 cup vital wheat gluten
- 2 tbsp parmesan cheese (powdered variety, not grated)
- salt and pepper to taste
- 1 egg

Mix dry ingredients. In a shallow dish, beat egg. Dip meat in eggs then in dry ingredients. Fry in oil.

And voilà! These are nice and crispy. Just perfect. Enjoy!

## *RECIPES*

### ***No-Bake Cheesecake***

#### Ingredients:

8 oz cream cheese, softened  
½ cup Splenda or other artificial sweetener in an equivalent amount  
8 oz sour cream  
2 teaspoons vanilla  
1 cup heavy whipping cream

#### Directions:

Pour whipping cream in a bowl and beat with a mixer until it is light and fluffy.

In a separate bowl, beat cream cheese until smooth. Gradually beat in your sugar substitute, and blend in sour cream and vanilla. Fold in whipping cream.

Spoon into pie plate and chill until set, 2-4 hours or overnight.

## *RECIPES*

### ***Low-Carb Cheese Chips***

#### Ingredients (and other things you will need):

Swiss cheese (or any other sliced, real cheese—not “cheese product”)

Parchment paper

Microwave

#### Directions:

Cut or tear each slice of cheese into quarters. Cut a circle of parchment paper the size of your microwave tray and arrange the cheese squares in a circle about 1 1/2 inches from the edge of the paper. Leave some room between slices as they will spread (you will probably need to do more than one batch). Cook on high power for about 2 minutes. Watch your first few batches carefully to determine what time is right for your microwave. The cheese will melt and then turn crispy. If it begins to turn **dark** brown, you are over-cooking them!

Allow them to cool and store in a re-closable plastic bag. Use as you would any chip with low-carb dip. Sprinkle them with chili powder for a different flavor! Unless your movie theater serves low-carb treats, you shouldn't feel too guilty about sneaking some of these into the movies to crunch instead of popcorn.

Do NOT try to make these on waxed paper. Parchment paper works best and is handy for all sorts of low-carb cooking tricks.

Note: Be sure to choose "real" Swiss, not processed cheese food—you can try other cheeses too but this one works well. My current favorite is horseradish cheddar—tastes better than it sounds!

## *RECIPES*

### ***Chicken Cheese Steak***

*This is too easy to even really be called a recipe. You can also make this with leftover steak or London broil.*

#### Ingredients:

A heap of leftover chicken, sliced thin or shredded

A big handful of cheese

Optional: mushrooms, peppers or onions, (leftover cooked broccoli is good too)

Olive or other cooking oil

#### Directions:

Add a little bit of oil to the bottom of a large skillet over medium-high heat; swirl the pan to coat the bottom of the pan lightly. Cook onions and other veggies if using until softened and a little brown. Add chicken and cook until it starts to brown as well. Take the pan off the heat and throw in the cheese. Stir it all about until the cheese melt. Dump it on a plate and eat it with a knife and fork. Some folks like to top this with a little shredded lettuce and a little Italian dressing or mayo—a chicken cheese steak sub on a plate.

Serve this with a green salad and you've got dinner.



## *RECIPES*

### ***Low-Carb Chili***

Ingredients:

3 lbs. ground meat (beef, pork, or turkey—your choice)  
1 large onion, chopped  
8 cloves garlic, minced  
28 oz. can low-carb diced tomatoes (try to find one with about 4 g of carbs for each ½ cup)  
1-1 ½ c. cold coffee  
2 Tablespoon chili powder  
1 tsp. oregano  
1 tsp. cumin  
1 tsp. paprika  
1 Tablespoon artificial sweetener (or 2 packets of Splenda)  
1 Tablespoon vinegar

Directions:

Big skillet method: Brown ground meat and drain off excess grease. Add onion and garlic and cook until soft. Add the rest of ingredients. Cook for a good long while, at least 20 minutes. Adjust seasonings to taste. Add salt to taste just before serving.

Crockpot method: Brown ground meat in skillet and drain off excess grease. Dump meat and all of the rest of the ingredients in a crockpot and turn on low for 8 hours or high for 4 hours. Add salt to taste just before serving.

Cook ahead note: This makes great leftovers! Freeze the extras but don't add salt until you defrost it again. This keeps the meat moister I think.

## *RECIPES*

### ***Cinnamon and Sugar Pork Rinds***

*These sound a little bizarre, but taste pretty good. This recipe has been around the low-carb world for a long time. Adjust cinnamon and sugar substitute amounts to your taste.*

#### Ingredients:

2 ounces fried pork rinds  
2 teaspoons ground cinnamon  
2 teaspoons granular sucrolose sweetener (eg. Splenda™)  
2 tablespoons butter, melted

#### Directions:

Spread the pork rinds out in a large shallow bowl, or you can do this in a plastic zip-top bag. In a small bowl, stir together the cinnamon and sweetener. Drizzle melted butter over the pork rinds while shaking the dish or bag to evenly distribute the butter on all sides of the rinds. Sprinkle with the cinnamon and sweetener, stirring to coat.

## *RECIPES*

### ***Creamed Chicken***

*Another “not really a recipe” recipe! Adjust ingredients to taste and your carb count.*

#### Ingredients:

Leftover chicken—chopped

Leftover veggies—broccoli, peppers, onions, mushrooms, spinach

2 Tablespoons butter

1 cup cream (see note below)

½ cup grated parmesan or other cheese

Salt & pepper to taste.

#### Directions:

Melt butter over medium high heat in large skillet. Add cream and stir together; toss in cheese. As cheese starts to melt and mixture begins to bubble, add your leftovers. Add salt & pepper to taste, but remember that cheese (especially parmesan) can be quite salty to begin with.

Serve over Fauxtatoes if you would like.

*Note: You can use heavy cream or sour cream or a mixture of both. If this is too rich for you, just use part cream and part water or chicken broth.*

## *RECIPES*

### ***Custard Breakfast Squares***

The original recipe says it makes 6 servings, but I found those portions too big for me and I am a serious eater. Cut into a size that works for you. Also, this will keep in the refrigerator for a couple of weeks if you transfer it to an airtight container. Some moisture may collect in the bottom, but I just pour that off. Make this a day in advance and then eat it cold or reheat it briefly in the microwave.

#### Ingredients:

10 eggs  
1 pint heavy cream  
1 pint water  
1 teaspoon almond extract  
5 packets Splenda  
1 teaspoon ground cinnamon (optional)

#### Directions:

Preheat oven to 350. Beat the eggs. Add all ingredients except the cinnamon. Blend well. Pour the mixture into an 8x8 non-metal baking dish. Sprinkle cinnamon (if using) on top. Place baking dish inside larger baking dish of cool water. (The water should be at least halfway up the side of baking dish with custard in it.) Bake for 40 minutes. Let cool. Refrigerate.

## *RECIPES*

### ***Deviled Ham Spread***

#### Ingredients:

1 ½ cups minced cooked ham (about 6 ounces)  
½ small jalapeño chili (or to taste), seeded and minced  
Worcestershire sauce to taste (you should not need very much)  
1 Tablespoon cream cheese  
2-3 Tablespoons mayonnaise

#### Directions:

In a bowl or bowl of food processor, mix together first 4 ingredients. Add just enough mayo to bind ingredients. Add salt and pepper to taste if needed. Chill overnight (although my ham spread seldom makes it to that point).

This is very tasty with celery or sweet pepper “boats”.

## *RECIPES*

### ***Easy Cheesy Omelet***

*This makes one serving. You can make a larger omelet, but you will need to adjust pan size accordingly. This works best with a non-stick skillet about 7-10" in diameter. The larger pan, the thinner the omelet.*

#### Ingredients:

1 tablespoon butter  
2 eggs, beaten  
1 tablespoon water  
¼ to 1/3 cup (or 1-2 ounces) sliced or shredded cheese  
Optional: ¼ cup cooked sausage, chopped ham, cooked bacon, chopped veggies

#### Directions:

If your skillet isn't the non-stick kind, spray it well with non-stick cooking spray.

Beat eggs and water together in a bowl or measuring cup.

Have cheese and any other fillings ready to go.

Melt the butter in the pan over medium high heat. When it starts to sizzle, swirl it around the pan to evenly coat the bottom of the pan. Pour in the eggs, which will immediately begin to set. Using a pancake turner, lift the edges of the omelet and allow the uncooked egg to run underneath. You can sort of push the cooked eggs to the middle of the pan a little as you do this.

Keep doing this until the egg looks mostly cooked (takes about 30-45 seconds). Sprinkle cheese and other fillings on half the omelet. Flip the other side onto the fillings. Cook a little bit longer and slide the whole thing onto a plate.

It may take a little practice to get a "pretty" omelet, but even the ugly ones taste good!

Note: Use your imagination (not to mention leftover from the fridge) to create all kinds of variations. My son loves pepperoni and sharp cheddar!

## *RECIPES*

### ***Easy Low-Carb Pudding***

#### Ingredients:

1 box sugar-free instant pudding, any flavor  
2 cups heavy cream (or mixture of cream and water)

#### Directions:

Beat pudding mix into 2 cups cold cream in bowl with wire whisk 2 minutes. If your pudding is lumpy or grainy, try an electric mixer, blender, or food processor to blend the ingredients, but don't over-beat, or you will have chocolate butter.

Pour at once into 8 individual serving dishes. Pudding will be soft-set and ready to eat within 5 minutes.

Notes: ***This will make 8 very rich servings of pudding***, rather than the 4 listed on the box. Carb count is 4g per serving.

If you want to get a little more protein in your meal, blend a scoop or two of sugar-free whey protein powder into the cream before adding pudding mix.

I pour the pudding into 8 small re-sealable plastic containers with lids. This keeps them fresh and makes them portable!

## *RECIPES*

### ***Egg Muffins***

*Makes 12 muffins. These keep well in the fridge and freeze well too!.*

#### Ingredients:

12 eggs

1-2 tsp. Spike Seasoning (if it's No Salt Spike, add ½ to ¾ tsp of salt); or use your favorite all-purpose seasoning, just make sure there is no sugar in it!

½ - 1 lb of cooked sausage, chopped ham, or cooked, crumbled bacon

1-2 cups grated cheese

Optional, but highly recommended: 3 green onions diced small.

Optional: chopped veggies such as blanched broccoli, zucchini, mushrooms, etc.

#### Directions:

Preheat oven to 375 F. Use regular or silicone muffin pans, 12 muffin size. If using silicone pan, spray with nonstick spray. If using regular muffin pan, put two paper liners into each slot, and then spray liner with nonstick spray.

In the bottom of the muffin cups layer diced meat, vegetables and green onions (if you are using them), and cheese. You want the muffin cups to be about 2/3 full, with just enough room to pour a little egg around the other ingredients. Break eggs into large measuring bowl with pour spout, add Spike or other seasonings, and beat well. Pour egg into each muffin cup until it is 3/4 full. Bake 25-35 minutes until muffins have risen and are slightly browned and set.

As soon as the muffins have cooled, put two at a time into small plastic bags. Put the bags in the refrigerator or freezer. Muffins will keep at least a week in the refrigerator without freezing. Egg muffins can be frozen and reheated. For best results, thaw in refrigerator before reheating. Microwave on high about 1-2 minutes to reheat.



## *RECIPES*

### ***Fauxtatoes***

*A classis low-carb trick and a great way to eat your veggies.*

#### Ingredients:

1 head cauliflower, cut or broken into chunks  
1/3 cup cream  
4 oz. cream cheese  
1 Tablespoon butter  
salt & pepper to taste

#### Directions:

Simmer cauliflower in water with 1/3 c. cream added (to retain color) until very soft. Drain the cauliflower and place in food processor with rest of ingredients while still warm (you may have to do ½ a batch at a time). Process until smooth.

If you don't have a food processor, mashing with a potato masher works fine (and think of all of the exercise your getting!)

Cook ahead note: I would like to say that this freezes well, but I never have enough leftovers to bother freezing! This does keep well in the fridge for a week, so plan for multiple meals with this. Some suggestions: beef stew with fauxtatoes; shrimp and cheese “grits” made with fauxtatoes, creamed chicken over fauxtatoes—you get the picture.

## *RECIPES*

### ***Fluffy Cream Dessert***

*This is a very quick, easy, and tasty dessert. This is also a great recipe for experimenting with different flavors.*

Ingredients:

1 pint heavy cream, chilled

1-2 teaspoons sugar-free fruit-flavored drink mix powder (like Crystal Lite)

OR

1 tablespoon unsweetened cocoa powder plus 2 Splenda packets

Directions:

Pour the cream in a bowl; add the drink mix powder (or cocoa & Splenda), and beat until light and fluffy.

Serves about 8 with only a trace of carb per serving.

## *RECIPES*

### ***Jicama Chips***

*Okay, these are not as perfectly crispy as potato chips, but if you pile them on a plate and cover them with cheese and sour cream and sprinkle on a bit of chopped bacon, they will do!*

Jicama

Oil for deep frying

Peel the jicama and cut it into quarters. Cut each quarter into very thin slices. Fry in hot oil until crisp and add salt while still hot.

Note: Jicamas can be quite large, and if sliced very thinly, this recipe can make a ridiculous amount of chips. Unless you have fellow low-carbers around (or kids who will eat anything deep fried, low-carb or not), just use a portion of the jicama and refrigerate the rest for another time. Raw jicama is a great crispy-sweet veggie that tastes great sliced up and used to scoop up almost any low-carb dip.

## *RECIPES*

### ***Lo-Carb Protein Smoothie***

#### Ingredients:

2 – 4 tablespoons heavy cream or light cream (not half-and-half)

$\frac{3}{4}$  - 1 cup water (or cold coffee)

1 scoop vanilla whey protein powder

Optional flavorings (if you don't use coffee): 1 tsp. Crystal Light powder

Optional: a cup of ice or more

#### Directions:

Blend all of these in a blender until smooth. If you want a “frozen” consistency, add a few more ice cubes.

You can adjust the “thickness” of this by using more or less cream or using “light cream,” (which is not the same as half & half).

## *RECIPES*

### ***North Carolina Pork Barbeque***

*You can make this in your slow-cooker, on the stove, or in the oven. Adjust the seasonings to your taste. This makes a lot, but it freezes very well.*

Yield: 10-12 servings

Ingredients:

1 pork butt, shoulder or blade roast (3 to 4 lbs.)  
1 can (15 oz.) whole tomatoes (check labels, look for lowest carb count)  
1/2 cup vinegar  
2 tablespoons Worcestershire sauce  
1 medium onion, sliced  
1 tablespoon artificial sweetener (Splenda works best here)  
2 teaspoons crushed red pepper flakes  
2 teaspoons salt  
1 teaspoon black pepper  
Optional: 1 teaspoon smoke flavoring.

Directions:

Combine all ingredients in crockpot or large heavy-bottomed kettle.

If using a crockpot, cover and cook on (choose one):

Low - 10 hours

Auto Shift - 7 hours

High - 5 hours

If using a kettle, simmer over low heat for 3-4 hours, or until done.

(You can also do this in the oven if you have a large, covered roasting pan.)

Pork is done when it falls apart if lifted with a fork. Remove meat and discard bone.

Dice or shred meat with a fork. Serve with sauce meat was cooked in or other barbecue sauce (Scott's BBQ sauce is tasty and less than 1 carb per serving).

Serve with homemade low-carb coleslaw if you like.

## *RECIPES*

### ***Low-Carb Coleslaw***

*The dressing for this is also good on spinach or broccoli salad.*

Ingredients:

½ cup mayonnaise

½ teaspoon salt

3 tablespoons splenda or other artificial sweetener

3 tablespoons vinegar

Cabbage

Directions:

Mix all ingredients until smooth. Adjust sweetener, vinegar, and salt to taste.

Chop or shredded the desired amount of cabbage. Add dressing until you have the “moistness” level you like. Save the rest for another batch.

## *RECIPES*

### ***You Won't Believe it's Not "Pancakes"***

*This is a Low Carb Luxury recipe (web site: [www.lowcarbluxury.com](http://www.lowcarbluxury.com)). They are a neat resource for the low-carb way of eating. We have it from a very reliable source that they make terrific waffles too.*

#### Ingredients:

1/2 of a 3-oz. bag of unflavored pork rinds  
2 eggs  
1/4 cup heavy cream  
3 packets Splenda  
1/2 teaspoon cinnamon  
1/2 teaspoon vanilla extract

#### Directions:

Crumble pork rinds up until they resemble bread crumbs (use your food processor if you like — or put them in a Ziploc bag, air removed, and roll them with a rolling pin.) Set aside.

Beat eggs well and then mix with remaining ingredients and beat again. Add crushed pork rinds to the egg/cream mixture and allow to sit for approximately 5 minutes. Mixture will thicken to a "gloppy" phase during this time.

Meanwhile, heat skillet or griddle with butter or oil, and when hot, fry pancake style until golden brown on both sides. Serve with lots of butter and a sprinkle of Splenda!

If you don't tell someone who eats them, they will never have a CLUE that these little french toast-like pancakes are made with pork rinds. And everyone loves 'em. Really. Yeah, really. Would I kid you?

Less than 1 net gram of carbohydrate per serving.

## *RECIPES*

### ***Shrimp Spread or Dip***

*Easy & quick, plus you get some protein with your dip!*

#### Ingredients:

1 can small shrimp  
1 8-oz. package Philadelphia cream cheese  
2 tablespoons mayonnaise  
1/2 small onion (chopped finely)  
1 hard boiled egg (chopped finely)  
2 tablespoon of fresh lemon juice  
salt and pepper

#### Directions:

Just mix all of the above ingredients with a fork until blended well (you can use pulse a few times in a food processor but then you have to clean it out!). You can add more onion if you like it more "oniony" or less and season to your taste with salt.



***LOW-CARB TIPS: CHOICES FOR ON THE ROAD***

Breakfast

- Hardee's: Lo-Carb breakfast bowl, if available  
Loaded Omelet
- Subway: Breakfast Wraps (avoid the wrap)--Double Bacon & Cheese is the best choice  
Avoid: Honey Mustard Ham & Egg Breakfast Wrap
- Chick-fil-A: Chicken or Sausage burrito—unwrap it and avoid the “tortilla”
- Waffle House: Eggs, bacon, sausage, omelet

Lunch/Dinner

- Hardee's, Burger King, McDonalds, Wendy's:  
Order a burger (bacon & cheese if you want) or grilled chicken sandwich,  
remove the buns and eat the burger or chicken with a knife and fork.
- Subway: Salads (toss the croutons, avoid the Italian dressing)  
Lo-Carb wraps, if available  
Double Meat Subs: Roast Beef, Turkey, Cheese Steak--without the bun
- Wendy's: Caesar Chicken Salad  
Order a Side salad or Caesar Side Salad along with your burger or grilled  
chicken sandwich (no bun)
- Burger King: TenderGRILL Chicken Garden or Chicken Caesar Salad (toss the “toast”)  
Avoid: Honey Mustard dressing
- Chick-fil-A: Chargrilled Chicken Salad or Grilled Chicken Sandwich without the bun  
Avoid: reduced fat or low-fat dressings; they are loaded with sugar
- Jersey Mike's: Sub in Tub

Snacks/Convenience Store

- Sunflower seeds or nuts – as allowed (plain or salted, avoid the honey-roasted)  
String cheese  
Dill pickle  
Pork rinds

## ***LOW CARB TIPS: Eating Out***

- Be prepared. Don't skip meals beforehand in an attempt to "save" calories or carbs.
- Snack on some hard-boiled eggs or cheese slices to take the edge off your appetite before leaving the house.
- An occasional glass of dry wine is okay (as allowed), but alcohol may interfere with your resolve to follow the diet.
- Don't feel you have to finish everything; get take-home containers for leftovers and enjoy them for lunch the next day.
- Many restaurants have nutritional information online; you may have reason to avoid those that don't.

### Italian

What to order: Antipasto (assorted meats, cheese, and marinated vegetable platter)  
Caponata (a salad usually made with tuna, olive oil, and capers)  
Seafood or meat entrees rather than pasta

Tip: Ask for a bowl of olives rather than a basket of bread.

### Chinese

What to order: Egg drop or hot & sour soup  
Stir-fried, steamed, or broiled seafood, meat and vegetable dishes without heavy sauces

Tip: Have a delicious stir-fried vegetable (watercress, broccoli, or green beans) instead of rice.

### Mexican

What to order: A real margarita made from tequila, lime juice, and triple sec (if weight loss is already established)  
Fajitas without the tortillas  
Chicken mole without the rice and beans  
Taco salad (just eat the salad)

Tip: Ask for a bowl of jicama or cucumber slices to dip in salsa or guacamole.

### Thai

What to order: Thai soups (these usually do not contain rice or noodles and have very little sugar)  
Stir-fried, steamed, grilled, or broiled seafood, meat, and vegetable dishes  
Curried seafood, meat and vegetable dishes without potatoes  
Green papaya salad  
Thai chicken salad (laarb)

Tip: Avoid the dipping sauces that may come with entrees; these are usually very sweet.

### French

What to order: Salad  
Seafood or meat in butter and cream  
Steak au poivre  
Cheese plate for dessert

Tip: Ask for a sautéed vegetable instead of the "pommes frites" that often accompany an entrée.

### Middle eastern

What to order: Kebabs (skewered meat or seafood, sometimes with vegetables)  
Vegetable dishes

Tip: Ask for raw veggies to dip in hummus or baba ghanoush

### Indian

What to order: Paneer (cheese) dishes  
Korma (meat) in cream or curried sauce  
Tandoori chicken or shrimp  
Chicken shorba soup

Tips: Order kebabs to dip in the delicious onion relish and cucumber-yogurt sauces.

Resources:

*All recipes from the Lifestyle Medicine Clinic, Duke University Medical Center*

